

# TABLES FOR SUPERSONIC

## FLOW OF HELIUM AROUND

### RIGHT CIRCULAR CONES

### AT ZERO ANGLE OF ATTACK

SIMS

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AT ZERO ANGLE OF ATTACK

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## Foreword

THIS REPORT PRESENTS, in tabular form, the results of the calculation of supersonic flow of helium about right circular cones at zero angle of attack. These calculations were performed using the Taylor-Maccoll theory as contained in reference 3. Numerical integrations were performed using a Runge-Kutta method for second-order differential equations.

Results were obtained for cone angles from 2.5 to 30 deg in regular increments of 2.5 deg. For each of the cone angles, a set of solutions was computed at nominal free-stream Mach numbers from 1.5 to 30.0. The free-stream Mach number was not increased by constant increments, but the same values were used for each cone angle. In all calculations the desired free-stream Mach number was obtained to five or more significant figures.

Tables 1 through 17 are included full size in this report; tables 18 through 230, which give the results for the complete flowfield for each calculation, are on microfiche and may be found in the envelope inside the back cover.

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# Introduction

SEVERAL hypersonic wind tunnels are in operation which use helium as a working fluid. Frequently, it is desirable to have theoretical solutions to compare with experimental data for analyses purposes. The supersonic flowfield solution for a sharp-pointed, right-circular cone is probably the most widely accepted theoretical solution in gas dynamics. In addition, conical flow results have been widely used in empirical analyses which provide approximate solutions to the flowfields about more complex configurations. Therefore, it appears that a set of helium flow cone solutions would be useful. Such a set of helium flow cone solutions is a logical extension of the air cone flow results given in references 1 and 2. This set of solutions for helium flow has been obtained and the results for zero angle of attack are presented herein. The results for small angles of attack will be presented in another report.

Basically, the same program which was used to generate the air cone flow solutions was used to generate the helium cone flow solutions. However, since the primary use envisioned for these tables is in conjunction with the helium

flow wind tunnels, the selected free-stream Mach numbers have been biased toward the hypersonic regime. For the present helium flow results, the ideal gas ratio of specific heats of 5:3 has been used as 1.6667.

To have these tables as similar as possible to the tables for air, solutions were computed for the same schedule of cone angles from 2.5 to 30 deg. Also, most of the free-stream Mach numbers that were selected below 20 correspond to Mach numbers that were used in the air cone flow tables. This correspondence of cone angles and Mach numbers of the two sets of tables allows easy, direct comparison of the helium and air solutions. In addition to the series of selected free-stream Mach numbers, a solution was computed for each cone angle which gave the minimum free-stream Mach number for a completely supersonic conical flowfield ( $u_s = \sqrt{(\gamma - 1)/(\gamma + 1)}$ ). This is the lowest free-stream Mach number for which the assumption of a conical flowfield is valid. For cone angles  $\geq 25$  deg, this minimum free-stream Mach number is  $> 1.5$ . Consequently, for these cone angles, the solutions at a free-stream Mach number of 1.5 were not computed.

# Symbols

|                    |   |             |   |
|--------------------|---|-------------|---|
| $\bar{a}$          | speed of sound  | $V$         | resultant nondimensional velocity at any conical ray align, $\bar{V}/\bar{V}_1$ |
| $a$                | nondimensional speed of sound, $\bar{a}/\bar{V}_1$  | $\bar{V}$   | velocity (dimensional)  |
| $a^*$              | critical speed of sound   | $\bar{V}_1$ | limiting velocity due to expansion into a vacuum                                |
| $C_p$              | pressure coefficient, $-\Delta P/q$   | $\gamma$    | ratio of specific heats, $c_p/c_v$ ; ideal gas value = 1.6667                   |
| $M_1^*$            | critical Mach number (see equation (7)), $\bar{V}/\bar{a}^*$  | $\beta$     | $= \sqrt{M^2 - 1}$  |
| $M$                | Mach number, $\bar{V}/\bar{a}$  | $\mu$       | Mach angle, radians   |
| $P$                | pressure  | $\psi_1$    | flow direction angle, angle between velocity vector $V$ and cone axis, radians  |
| $q$                | free-stream dynamic pressure, $\rho/2V_\infty^2$  | $\rho$      | density   |
| $r, x$             | cylindrical coordinate axes, with origin at tip of cone; $x$ -axis = cone axis                              | $\theta$    | conical ray angle from cone axis, radians                                       |
| $R$                | universal gas constant  | $\Delta S$  | increase in entropy   |
| $T$                | absolute temperature  |             |   |
| $\bar{u}, \bar{v}$ | velocity components, dimensional (fig. 1)   |             |   |
| $u$                | nondimensional velocity along conical ray line in spherical coordinate system (fig. 1), $\bar{u}/\bar{V}_1$ |             |   |
| $v$                | nondimensional velocity normal to conical ray line in spherical coordinate system, $\bar{v}/\bar{V}_1$      |             |   |

## Subscripts

|          |                               |
|----------|-------------------------------|
| $s$      | values at cone surface        |
| $w$      | conditions back of shock wave |
| $\infty$ | free-stream condition         |

# Solution of the Equations

THE DERIVATIONS of the basic equations for the conical flow problem are given quite adequately in reference 3 and will not be repeated here. However, much of the discussion given in reference 1 will be repeated for clarity and completeness. The differential equation that is the formulation of the conical flow problem in a spherical coordinate system (fig. 1) is:

$$\frac{d^2 u}{d\theta^2} + u = \frac{a^2(u + v \cot \theta)}{v^2 - a^2} \quad (1)$$

where

$$v = \frac{du}{d\theta} \quad (2)$$

and

$$a^2 = \frac{\gamma-1}{2} (1 - u^2 - v^2) \quad (3)$$

where all velocities are nondimensionalized by dividing them by the limiting velocity attainable by adiabatic expansion into a vacuum. Equations (1), (2), and (3), with appropriate boundary conditions, specify the entire flowfield around a half-infinite cone.

Boundary conditions must be specified at the cone and shock surfaces; conditions at one boundary are specified in functional form and determined in the solution. In the present solution, the cone angle was specified which gives

$$\left. \begin{aligned} \theta &= \theta_s \\ u &= u_s \\ v &= 0 \end{aligned} \right\} \quad (4)$$

at the surface of the cone. The shock wave or upper boundary condition is obtained by requiring the results obtained from the integration of

equation (1) to satisfy the Rankine-Hugoniot equations which can be expressed as

$$\tan \theta = \frac{\gamma-1}{\gamma+1} \frac{u^2-1}{uv} \quad (5)$$

When equation (5) is satisfied by the results from the integration of equation (1), the ray angle equals the shock wave angle,  $\theta_w = \theta$ , and the free-stream Mach number is given by

$$M_\infty = \sqrt{\frac{2}{\gamma-1} \frac{u^2}{\cos^2 \theta - u^2}} \quad (6)$$

Solutions of equation (1) were obtained using a standard Runge-Kutta integration method for ordinary differential equations. Computation for

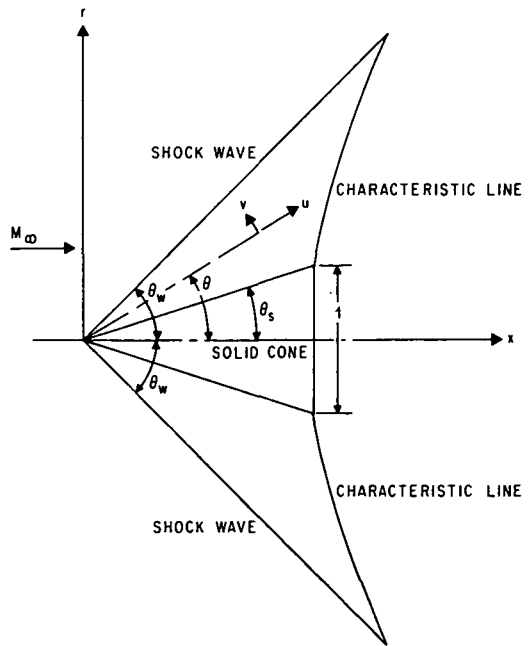


FIGURE 1.—Coordinate system.

each solution started at the solid surface of the cone by specifying values of  $\theta_s$  and  $u_s$ . The basic flowfield solution is complete when the integration from  $\theta_s$  to  $\theta$  satisfies the implicit boundary condition given in equation (5). This method of solution does not yield a specific free-stream Mach number without a priori knowledge of the value of  $u_s$  that should be specified. Therefore, an external iteration procedure was devised for the computer program which found the value of  $u_s$  required to yield a specified free-stream Mach number for a specified cone angle.

Specific calculations were not made to ascertain the accuracy of the helium flow solutions. This was not deemed to be necessary since an extensive investigation had been conducted to determine the general accuracy of airflow solutions. This investigation indicated that the maximum integration error in the tangential velocity component ( $u$ ) at any ray angle ( $\theta$ ) is less than  $5 \times 10^{-6}$  with a minimum value of  $u$  of approximately 0.162. On a percentage basis, this is the absolute worst case. The Rankine-Hugoniot conditions, as represented by equation (5), were satisfied to an accuracy of  $\pm 2 \times 10^{-7}$  in all cases.

Integration of equation (1) yields values of  $u$ ,  $v$ , and  $a$  at each conical ray angle  $\theta$ . These results have been transformed into a resultant dimensionless velocity, flow angle, and Mach angle in the following manner:

$$M_1^* = \frac{V}{a^*} = \sqrt{\frac{\gamma+1}{\gamma-1} (u^2 + v^2)} \quad (7)$$

since

$$\frac{V_1}{a^*} = \sqrt{\frac{\gamma+1}{\gamma-1}} \quad (8)$$

and the flow direction angle  $\psi_1$  is

$$\psi_1 = \theta + \tan^{-1} \frac{v}{u} \quad (9)$$

and

$$\mu = \sin^{-1} \sqrt{\frac{a^2}{u^2 + v^2}} \quad (10)$$

However, because of space limitations on the individual pages, the values of the Mach angle,  $\mu$ , will be presented in the small angle of attack tables.

## Discussion of Results

THE FORMAT of the tables for the individual solutions lists the dimensionless velocity and flow angle, which are invariant along the ray lines, and a pair of geometric coordinates ( $x$ ,  $r$ ) as a function of the conical ray angle. The geometric coordinates specify the location of a left-running characteristic line emanating from the base of the cone and terminating at the shock wave. These results are in a cylindrical coordinate system that has its origin at the cone vertex and the cone base diameter is assumed to be 1.0. Coordinates of the characteristic line were computed using the basic integration step size during the integration and cannot be duplicated using the tabulated values of the flow variables.

It is possible to ratio the locations of the characteristic points to a cone of any other physical size (same angle) by using a base diameter ratio. Tables for the individual flowfields are printed directly from the computer printout and are in a standard E format. All tabular results are for  $\gamma = 1.6667$ .

In the tables, the quantities  $M_1^*$ ,  $\psi_1$ ,  $x$ , and  $r$  are listed as functions of the conical ray angle, starting at the cone surface and terminating at the shock wave;  $x$  and  $r$  are the coordinates (in the cylindrical coordinate system) of the characteristic start line in cone base diameters,  $M_1^*$  is the nondimensional velocity, and  $\psi_1$  is the flow direction angle in radians. The results

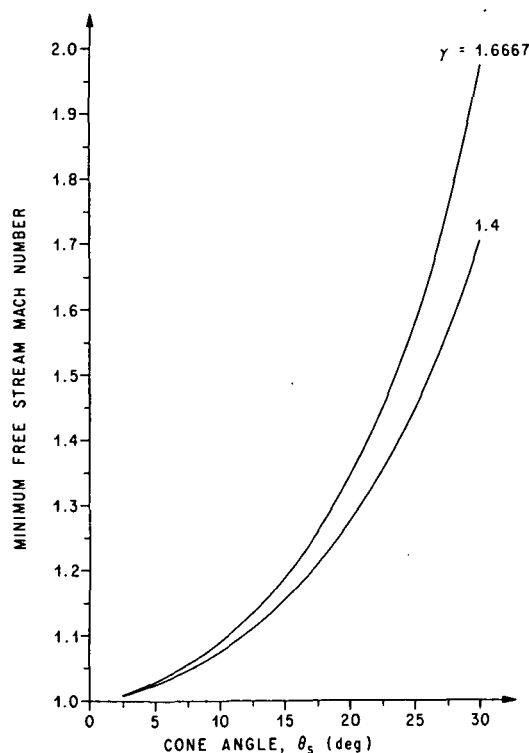


FIGURE 2.—Free-stream Mach number corresponding to sonic surface Mach number for helium and air.

given at the end of each table ( $\Delta S/R$ ,  $P_s/P_\infty$ ,  $\rho_s/\rho_\infty$ , and  $T_s/T_\infty$ ) were computed using the integrated flowfield results along with shock wave and isentropic equations (5). The summary tables (tables 1 through 17) for the surface, shock wave, and minimum free-stream Mach number solutions were tabulated by hand from the individual solution tables and are given in the customary decimal form.

Table 1 gives the minimum free-stream Mach number and a summary of the respective surface results for each cone angle. Tables 2 through 9 summarize the pertinent surface results for all cone angles at each specified free-stream Mach number. The tolerance on the iteration scheme for the free-stream Mach number was selected to yield the specified value with an accuracy of at least five significant figures. Therefore, the summary tables list the nominal or specified free-stream Mach number. However, the exact free-stream Mach number determined in each case is listed at the beginning of each individual

table. Shock-wave angles and flow results immediately behind the shock wave are given in table 10 for the minimum free-stream Mach number solutions. Tables 11 through 17 give shock wave angles and flow parameters immediately behind the shock wave for all solutions in which the free-stream Mach number was specified. Results for the complete flowfield for each calculation are given in tables 18 through 230. In these tables, the results are tabulated, starting at the cone surface and proceeding through the flowfield to the shock wave. The free-stream Mach number listed in each of these tables was computed from the Rankine-Hugoniot equations as given by equation (6).

To gain an insight into the major differences between helium flow and airflow results, some of the present results are compared with corresponding results from reference 1. Figures 2 and 3 present a comparison of the minimum free-stream Mach number and the corresponding surface to free-stream pressure ratios. It is seen from

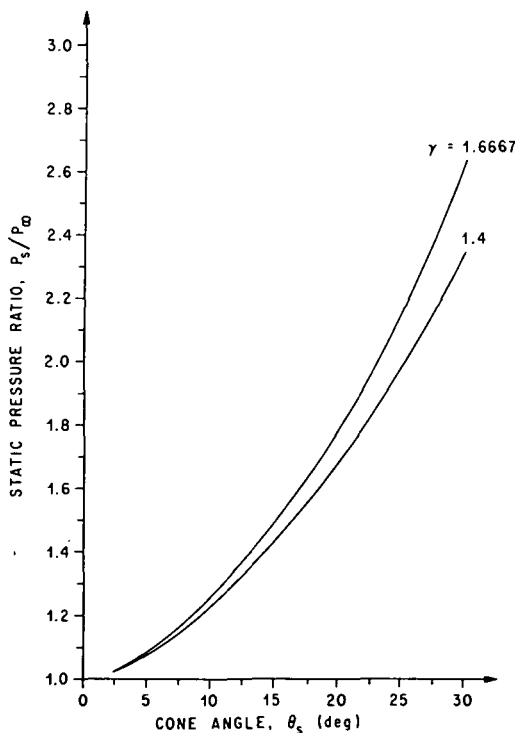


FIGURE 3.—Cone surface to free-stream static pressure ratio at the minimum free-stream Mach number for helium and air.



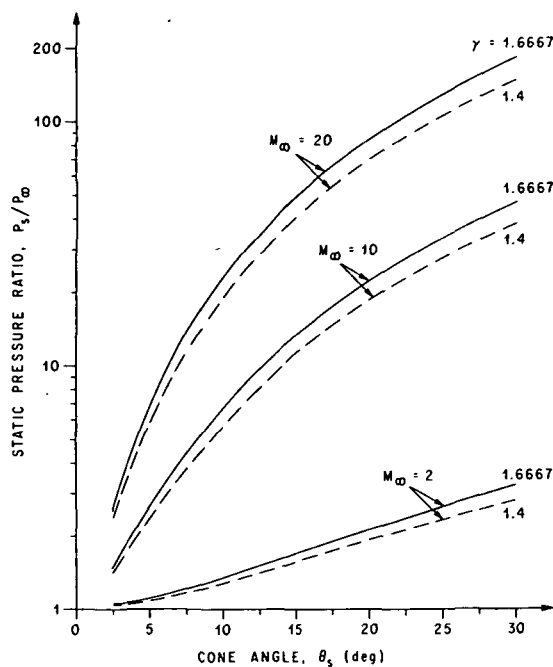


FIGURE 4.—Cone surface to free-stream static pressure ratio at selected free-stream Mach numbers for helium and air.

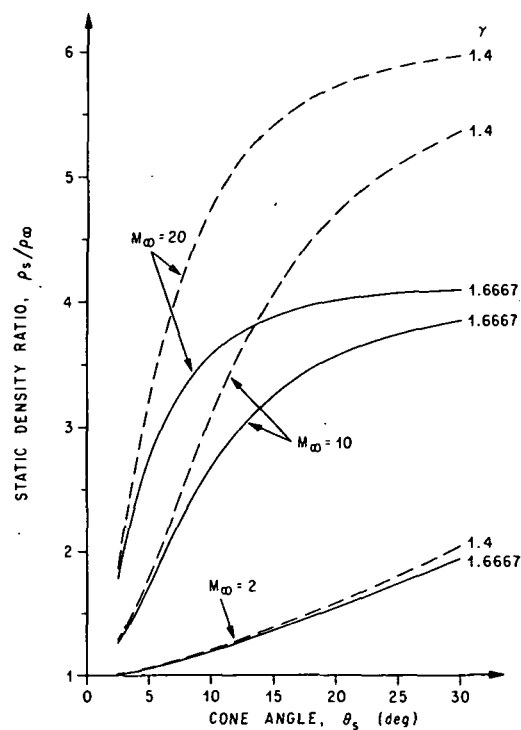


FIGURE 5.—Cone surface to free-stream static density ratio at selected free-stream Mach numbers for helium and air.

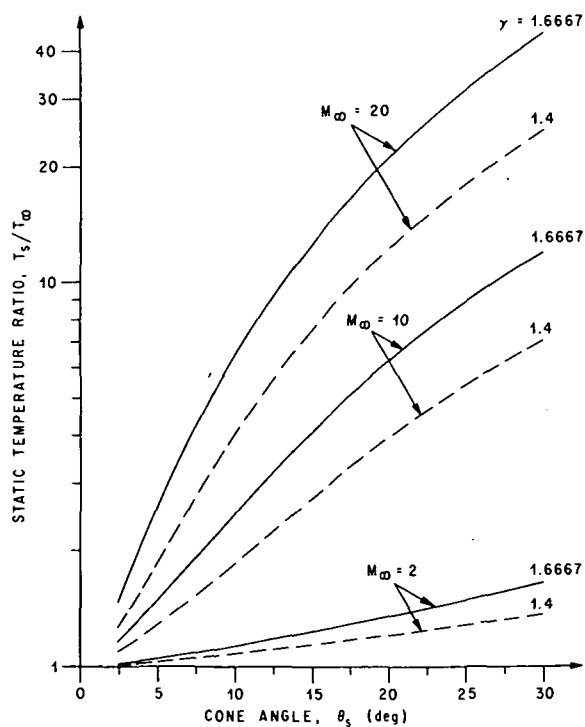


FIGURE 6.—Cone surface to free-stream static temperature ratio at selected free-stream Mach numbers for helium and air.

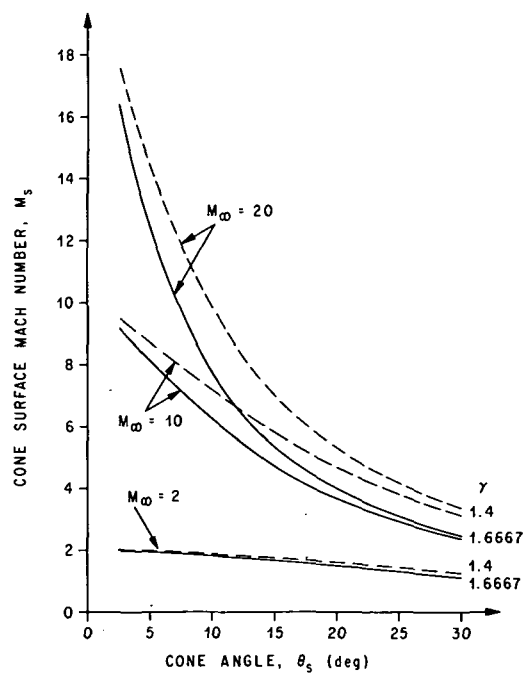


FIGURE 7.—Cone surface Mach number at selected free-stream Mach numbers for helium and air.

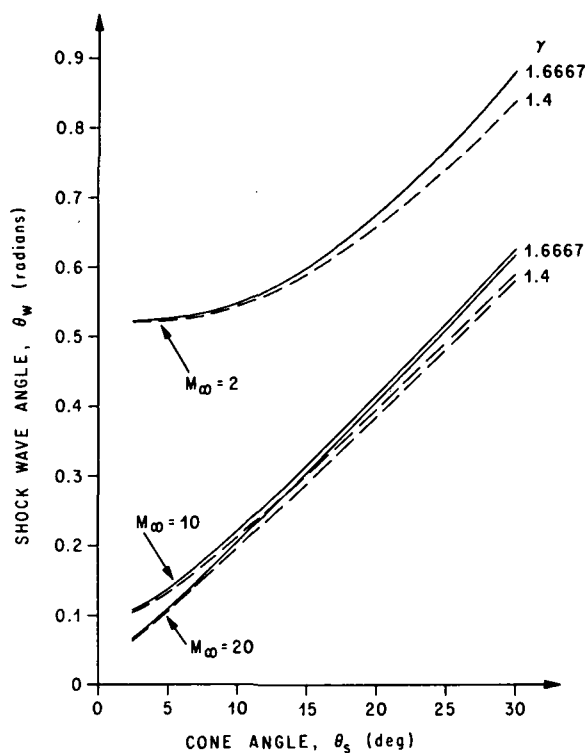


figure 2 that a higher free-stream Mach number is required for the helium flowfield to be entirely supersonic. Also, under these conditions, the helium flow yields a higher surface pressure as shown in figure 3. Figures 4 through 8 compare pertinent results for helium flow and airflow for free-stream Mach numbers of 2, 10, and 20 over the range of cone angles for which solutions were obtained. Figures 4, 5, and 6 present the comparison of surface pressure, density, and temperature ratios, respectively. It is seen that pressures are similar for the two gases, but there are large differences in density and temperature. Also, figure 7 shows that relatively large differences may exist in the surface Mach number. The shock wave angles given in figure 8 show a maximum difference of approximately 2.5 deg.

FIGURE 8.—Conical flow shock wave angles at selected free-stream Mach numbers for helium and air.

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TABLE 1. — Values for Minimum Free-Stream Mach Number

| $\theta_s$ | $M_\infty$ | $P_s/P_\infty$ | $\rho_s/\rho_\infty$ | $T_s/T_\infty$ | $\Delta S/R$ | $M_{1s}^*$ | $M_s$     | $C_p$     |
|------------|------------|----------------|----------------------|----------------|--------------|------------|-----------|-----------|
| 2.5        | 1.0134245  | 1.0169789      | 1.0101528            | 1.0067575      | 0            | 1.0000000  | 1.0000000 | .01983807 |
| 5.0        | 1.0423414  | 1.0549268      | 1.0326024            | 1.0216196      | 0            | 1.0000000  | 1.0000000 | .06066482 |
| 7.5        | 1.0814963  | 1.1094174      | 1.0642812            | 1.0424101      | .00000033    | 1.0000000  | 1.0000000 | .11225582 |
| 10.0       | 1.1289566  | 1.1805180      | 1.1046938            | 1.0686382      | .00000455    | 1.0000000  | 1.0000000 | .16995681 |
| 12.5       | 1.1837936  | 1.2700000      | 1.1541830            | 1.1003455      | .00003650    | 1.0000000  | 1.0000000 | .23119815 |
| 15.0       | 1.2456277  | 1.3809329      | 1.2135779            | 1.1379022      | .00019692    | 1.0000000  | 1.0000000 | .29460799 |
| 17.5       | 1.3145811  | 1.5178615      | 1.2841059            | 1.1820376      | .00078437    | 1.0000000  | 1.0000000 | .35959316 |
| 20.0       | 1.3913074  | 1.6871730      | 1.3673025            | 1.2339428      | .00246623    | 1.0000000  | 1.0000000 | .42598319 |
| 22.5       | 1.4771237  | 1.8978707      | 1.4649891            | 1.2954846      | .00646007    | 1.0000000  | 1.0000000 | .49380175 |
| 25.0       | 1.5742015  | 2.1629060      | 1.5792922            | 1.3695414      | .01471351    | 1.0000000  | 1.0000000 | .56311426 |
| 27.5       | 1.6858701  | 2.5015002      | 1.7127033            | 1.4605567      | .03012508    | 1.0000000  | 1.0000000 | .63394231 |
| 30.0       | 1.8171784  | 2.9434415      | 1.8681925            | 1.5755558      | .05690670    | 1.0000000  | 1.0000000 | .70623445 |

TABLE 2.—Values of  $P_s/P_\infty$ 

| $\theta$<br>$M_\infty$ | 2.5       | 5.0       | 7.5       | 10.0      | 12.5      | 15.0      | 17.5      | 20.0      | 22.5      | 25.0      | 27.5      | 30.0      |
|------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1.5                    | 1.0232159 | 1.0745277 | 1.1455636 | 1.2332915 | 1.3364749 | 1.4548319 | 1.5888432 | 1.7399299 | 1.9114321 |           |           |           |
| 2.0                    | 1.0360684 | 1.1134598 | 1.2194818 | 1.3502548 | 1.5043755 | 1.6813360 | 1.8809025 | 2.1029818 | 2.3476306 | 2.6153053 | 2.9072298 | 3.2264983 |
| 2.5                    | 1.0513699 | 1.1598375 | 1.3086335 | 1.4938257 | 1.7144398 | 1.9701484 | 2.2604788 | 2.5849456 | 2.9427356 | 3.3329899 | 3.7551657 | 4.2091364 |
| 3.0                    | 1.0687504 | 1.2126438 | 1.4113787 | 1.6616878 | 1.9632718 | 2.3159334 | 2.7189982 | 3.1711779 | 3.6710110 | 4.2165381 | 4.8058727 | 5.4373181 |
| 4.0                    | 1.1090864 | 1.3362939 | 1.6568420 | 2.0703033 | 2.5776198 | 3.1784276 | 3.8709522 | 4.6522403 | 5.5183153 | 6.4649110 | 7.4874889 | 8.5806569 |
| 5.0                    | 1.1561534 | 1.4833703 | 1.9563093 | 2.5781175 | 3.3504457 | 4.2720355 | 5.3391268 | 6.5462733 | 7.8866630 | 9.3523279 | 10.935377 | 12.627171 |
| 6.0                    | 1.2094528 | 1.6539630 | 2.3111075 | 3.1874803 | 4.2847755 | 5.5998872 | 7.1264619 | 8.8557160 | 10.777171 | 12.878821 | 15.148710 | 17.573767 |
| 8.0                    | 1.3338664 | 2.0674051 | 3.1914099 | 4.7175853 | 6.6452128 | 8.9654658 | 11.664634 | 14.725590 | 18.129032 | 21.851765 | 25.871673 | 30.165444 |
| 10.0                   | 1.4816294 | 2.5800821 | 4.3048638 | 6.6695741 | 9.6678960 | 13.283011 | 17.492439 | 22.267416 | 27.577129 | 33.385814 | 39.658131 | 46.355504 |
| 12.5                   | 1.6993700 | 3.3645023 | 6.0305715 | 9.7088604 | 14.383082 | 20.024124 | 26.594169 | 34.048663 | 42.338037 | 51.406712 | 61.197833 | 71.651783 |
| 15.0                   | 1.9547292 | 4.3119101 | 8.1314269 | 13.417678 | 20.141879 | 28.260013 | 37.716260 | 48.446447 | 60.378985 | 73.431670 | 87.523451 | 102.56928 |
| 17.5                   | 2.2485569 | 5.4244491 | 10.609522 | 17.797664 | 26.945949 | 37.991870 | 50.859730 | 65.461216 | 81.697615 | 99.459888 | 118.63621 | 139.10789 |
| 20.0                   | 2.5816568 | 6.7037899 | 13.466124 | 22.849994 | 34.795166 | 49.220171 | 66.024217 | 85.093087 | 106.29692 | 129.49314 | 154.53491 | 181.26853 |
| 22.5                   | 2.9545939 | 8.1506331 | 16.701941 | 28.574622 | 43.690427 | 61.944818 | 83.210721 | 107.34209 | 134.17484 | 163.53049 | 195.21914 | 229.05009 |
| 25.0                   | 3.3678814 | 9.7659290 | 20.317204 | 34.972155 | 53.631537 | 76.166305 | 102.41933 | 132.20831 | 165.33298 | 201.57121 | 240.69276 | 282.45050 |
| 27.5                   | 3.8223886 | 11.549630 | 24.312541 | 42.042945 | 64.620957 | 91.885391 | 123.64908 | 159.69364 | 199.77175 | 243.61983 | 290.94914 | 341.47787 |
| 30.0                   | 4.3176202 | 13.502116 | 28.687463 | 49.786623 | 76.652671 | 109.10099 | 146.90190 | 189.79358 | 237.48982 | 289.67131 | 345.99375 | 406.12439 |

TABLE 3. — Values of  $\rho_s/\rho_\infty$ 

| $\theta_s$<br>$M_\infty$ | 2.5       | 5.0       | 7.5       | 10.0      | 12.5      | 15.0      | 17.5      | 20.0      | 22.5      | 25.0      | 27.5      | 30.0      |
|--------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1.5                      | 1.0138653 | 1.0440714 | 1.0849526 | 1.1340619 | 1.1900394 | 1.2520455 | 1.3195650 | 1.3924136 | 1.4710838 |           |           |           |
| 2.0                      | 1.0214871 | 1.0666063 | 1.1264277 | 1.1973831 | 1.2773621 | 1.3646495 | 1.4575773 | 1.5545397 | 1.6540753 | 1.7549984 | 1.8564950 | 1.9583628 |
| 2.5                      | 1.0305120 | 1.0930434 | 1.1751212 | 1.2720154 | 1.3804867 | 1.4973950 | 1.6195669 | 1.7441358 | 1.8685767 | 1.9908799 | 2.1036228 | 2.2238852 |
| 3.0                      | 1.0406997 | 1.1226343 | 1.2295639 | 1.3552207 | 1.4943952 | 1.6417639 | 1.7923375 | 1.9418705 | 2.0871654 | 2.2259162 | 2.3567247 | 2.4789013 |
| 4.0                      | 1.0640908 | 1.1899510 | 1.3528868 | 1.5408204 | 1.7415842 | 1.9442191 | 2.1403684 | 2.3245440 | 2.4937224 | 2.6468146 | 2.7839736 | 2.9060165 |
| 5.0                      | 1.0909590 | 1.2666990 | 1.4913578 | 1.7417934 | 1.9963617 | 2.2392768 | 2.4613743 | 2.6588369 | 2.8313226 | 2.9804157 | 3.1086412 | 3.2187167 |
| 6.0                      | 1.1208612 | 1.3514996 | 1.6399253 | 1.9470887 | 2.2423020 | 2.5082627 | 2.7386551 | 2.9338018 | 3.0971981 | 3.2333894 | 3.3469312 | 3.4418443 |
| 8.0                      | 1.1886554 | 1.5396140 | 1.9483342 | 2.3386530 | 2.6731992 | 2.9445438 | 3.1593040 | 3.3280414 | 3.4608974 | 3.5661760 | 3.6503932 | 3.7184447 |
| 10.0                     | 1.2658133 | 1.7425617 | 2.2470732 | 2.6767116 | 3.0086460 | 3.2560402 | 3.4393558 | 3.5762145 | 3.6798141 | 3.7594381 | 3.8216179 | 3.8708885 |
| 12.5                     | 1.3733451 | 2.0006200 | 2.5804855 | 3.0122452 | 3.3121205 | 3.5187882 | 3.6634622 | 3.7671151 | 3.8432159 | 3.9003775 | 3.9442191 | 3.9784798 |
| 15.0                     | 1.4906881 | 2.2487768 | 2.8590867 | 3.2634197 | 3.5221401 | 3.6908658 | 3.8046156 | 3.8840020 | 3.9411988 | 3.9835603 | 4.0157093 | 4.0406263 |
| 17.5                     | 1.6149169 | 2.4772564 | 3.0850359 | 3.4501115 | 3.6696312 | 3.8072373 | 3.8576630 | 3.9596771 | 4.0038123 | 4.0362085 | 4.0606291 | 4.0794520 |
| 20.0                     | 1.7431864 | 2.6817220 | 3.2661106 | 3.5898927 | 3.7755273 | 3.8886335 | 3.9616200 | 4.0110874 | 4.0459918 | 4.0714511 | 4.0905576 | 4.1052242 |
| 22.5                     | 1.8728586 | 2.8613141 | 3.4109397 | 3.6958925 | 3.8534279 | 3.9473820 | 4.0072314 | 4.0474386 | 4.0756339 | 4.0961180 | 4.1114350 | 4.1231601 |
| 25.0                     | 2.0017036 | 3.0173907 | 3.5272065 | 3.7775222 | 3.9120266 | 3.9909755 | 4.0407763 | 4.0740054 | 4.0972150 | 4.1140180 | 4.1265514 | 4.1361259 |
| 27.5                     | 2.1280613 | 3.1521389 | 3.6211935 | 3.8413737 | 3.9570636 | 4.0241197 | 4.0661001 | 4.0939863 | 4.1133932 | 4.1274068 | 4.1378396 | 4.1457948 |
| 30.0                     | 2.2502569 | 3.2682133 | 3.6977563 | 3.8920494 | 3.9922808 | 4.0498531 | 4.0856676 | 4.1093622 | 4.1258217 | 4.1376706 | 4.1464778 | 4.1531894 |

TABLE 4. — Values of  $T_s/T_\infty$

| $\theta_s$<br>$M_\infty$ | 2.5       | 5.0       | 7.5       | 10.0      | 12.5      | 15.0      | 17.5      | 20.0      | 22.5      | 25.0      | 27.5      | 30.0      |
|--------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1.5                      | 1.0092228 | 1.0291707 | 1.0558652 | 1.0874992 | 1.1230510 | 1.1619641 | 1.2040659 | 1.2495784 | 1.2993359 |           |           |           |
| 2.0                      | 1.0142746 | 1.0439276 | 1.0826100 | 1.1276715 | 1.1777205 | 1.2320644 | 1.2904308 | 1.3528004 | 1.4193010 | 1.4902038 | 1.5659778 | 1.6475488 |
| 2.5                      | 1.0202403 | 1.0611083 | 1.1136158 | 1.1743771 | 1.2419097 | 1.3157173 | 1.3957305 | 1.4820782 | 1.5748541 | 1.6741291 | 1.7800177 | 1.8926951 |
| 3.0                      | 1.0269537 | 1.0801770 | 1.1478693 | 1.2261382 | 1.3137568 | 1.4106373 | 1.5170124 | 1.6330533 | 1.7588501 | 1.8942933 | 2.0392169 | 2.1934388 |
| 4.0                      | 1.0422855 | 1.1229823 | 1.2246716 | 1.3436370 | 1.4800432 | 1.6348095 | 1.8085449 | 2.0013562 | 2.2128828 | 2.4425251 | 2.6894971 | 2.9527214 |
| 5.0                      | 1.0597587 | 1.1710519 | 1.3117639 | 1.4801512 | 1.6782759 | 1.9077747 | 2.1691650 | 2.4620816 | 2.7855050 | 3.1379274 | 3.5177354 | 3.9230452 |
| 6.0                      | 1.0790389 | 1.2237984 | 1.4092761 | 1.6370494 | 1.9108825 | 2.2325761 | 2.6021758 | 3.0185122 | 3.4796518 | 3.9830715 | 4.5261493 | 5.1059158 |
| 8.0                      | 1.1221641 | 1.3428075 | 1.6380197 | 2.0172233 | 2.4858652 | 3.0447725 | 3.6921532 | 4.4247018 | 5.2382462 | 6.1275062 | 7.0873663 | 8.1123822 |
| 10.0                     | 1.1704960 | 1.4806261 | 1.9157649 | 2.4917045 | 3.2133711 | 4.0794985 | 5.0859638 | 6.2265326 | 7.4941638 | 8.8805331 | 10.377315 | 11.975417 |
| 12.5                     | 1.2373948 | 1.6817298 | 2.3369911 | 3.2231309 | 4.3425601 | 5.6906308 | 7.2592995 | 9.0383922 | 11.016305 | 13.179933 | 15.515830 | 18.009840 |
| 15.0                     | 1.3112932 | 1.9174469 | 2.8440645 | 4.1115395 | 5.7186480 | 7.6567436 | 9.9132911 | 12.473333 | 15.319955 | 18.433679 | 21.795266 | 25.384500 |
| 17.5                     | 1.3923669 | 2.1897004 | 3.4390273 | 5.1585767 | 7.3429585 | 9.9788556 | 13.048776 | 16.531959 | 20.404957 | 24.641911 | 29.216214 | 34.099652 |
| 20.0                     | 1.4809987 | 2.4998080 | 4.1229848 | 6.3650913 | 9.2159755 | 12.657447 | 16.665964 | 21.214468 | 26.272156 | 31.805159 | 37.778447 | 44.155573 |
| 22.5                     | 1.5775851 | 2.8485628 | 4.8965807 | 7.7314543 | 11.338068 | 15.692633 | 20.765140 | 26.520993 | 32.921221 | 39.923288 | 47.481996 | 55.552073 |
| 25.0                     | 1.6825076 | 3.2365477 | 5.7601403 | 9.2579616 | 13.709400 | 19.084634 | 25.346449 | 32.451677 | 40.352527 | 48.996192 | 58.327823 | 68.288662 |
| 27.5                     | 1.7961835 | 3.6640613 | 6.7139581 | 10.944768 | 16.330533 | 22.833663 | 30.409748 | 39.006882 | 48.566170 | 59.024914 | 70.314264 | 82.367288 |
| 30.0                     | 1.9187233 | 4.1313450 | 7.7580732 | 12.791879 | 19.200221 | 26.939492 | 35.955420 | 46.185657 | 57.561825 | 70.008308 | 83.442810 | 97.786148 |

TABLE 5. — Values of  $\Delta S/R$ 

| $\theta_s$<br>$M_\infty$ | 2.5        | 5.0        | 7.5         | 10.0       | 12.5       | 15.0       | 17.5       | 20.0       | 22.5       | 25.0       | 27.5       | 30.0       |
|--------------------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 1.5                      | 0.0        | 0.0        | 0.00000041  | 0.00000906 | 0.00007857 | 0.00037763 | 0.00123995 | 0.00315394 | 0.00676087 |            |            |            |
| 2.0                      | 0.0        | 0.0        | 0.00000495  | 0.00008487 | 0.00056179 | 0.00212346 | 0.00566935 | 0.01206307 | 0.02197831 | 0.03587148 | 0.05404168 | 0.07678661 |
| 2.5                      | 0.0        | 0.00000055 | 0.000003885 | 0.00049214 | 0.00252308 | 0.00782540 | 0.01794304 | 0.03387924 | 0.05603285 | 0.08432426 | 0.11838251 | 0.15769906 |
| 3.0                      | 0.0        | 0.00000354 | 0.00019130  | 0.00182473 | 0.00759415 | 0.02026538 | 0.04156251 | 0.07198873 | 0.11114110 | 0.15805227 | 0.21152249 | 0.27033147 |
| 4.0                      | 0.0        | 0.00006112 | 0.00175315  | 0.01073304 | 0.03328228 | 0.7239215  | 0.12776150 | 0.19716164 | 0.27760801 | 0.36612475 | 0.46007788 | 0.55722639 |
| 5.0                      | 0.00000038 | 0.00042747 | 0.00735167  | 0.03327166 | 0.08528535 | 0.16270484 | 0.26073551 | 0.37355447 | 0.49582300 | 0.62319523 | 0.75244606 | 0.88121706 |
| 6.0                      | 0.00000301 | 0.00170928 | 0.01993781  | 0.07297093 | 0.16379614 | 0.28508362 | 0.42698318 | 0.58076409 | 0.73980698 | 0.89944530 | 1.0566502  | 1.2094700  |
| 8.0                      | 0.00005714 | 0.01058996 | 0.07322027  | 0.20295519 | 0.38258687 | 0.59010193 | 0.89886498 | 1.0283088  | 1.2423280  | 1.4475520  | 1.6424890  | 1.8266249  |
| 10.0                     | 0.00041483 | 0.03331184 | 0.16549805  | 0.38479304 | 0.64940313 | 0.92834389 | 1.2043207  | 1.4687875  | 1.7181736  | 1.9513592  | 2.1685839  | 2.3706138  |
| 12.5                     | 0.00224689 | 0.08623824 | 0.32525519  | 0.65275636 | 1.0049974  | 1.3499846  | 1.6748677  | 1.9757473  | 2.2525752  | 2.5067764  | 2.7403346  | 2.9552608  |
| 15.0                     | 0.00726265 | 0.16605660 | 0.51727065  | 0.93781462 | 1.3563991  | 1.7473664  | 2.1044276  | 2.4283342  | 2.7220446  | 2.9888744  | 3.2320940  | 3.4545658  |
| 17.5                     | 0.01719938 | 0.26843661 | 0.72612706  | 1.2224615  | 1.6903721  | 2.1136262  | 2.4924718  | 2.8315701  | 3.1361937  | 3.4111269  | 3.6604947  | 3.8877034  |
| 20.0                     | 0.03333086 | 0.38779309 | 0.94115999  | 1.4979818  | 2.0027010  | 2.4491205  | 2.8431888  | 3.1927336  | 3.5047926  | 3.7851838  | 4.0386545  | 4.2690343  |
| 22.5                     | 0.05634280 | 0.51886240 | 1.1556988   | 1.7605700  | 2.2931036  | 2.7565280  | 3.1615853  | 3.5185748  | 3.8358878  | 4.1201234  | 4.3764642  | 4.6090600  |
| 25.0                     | 0.08639030 | 0.65728036 | 1.3658053   | 2.0089907  | 2.5628707  | 3.0390684  | 3.4522787  | 3.8147405  | 4.1358962  | 4.4229218  | 4.6813717  | 4.9155393  |
| 27.5                     | 0.12324093 | 0.79967967 | 1.5693365   | 2.2432829  | 2.8138432  | 3.2998131  | 3.7192044  | 4.0858132  | 4.4098512  | 4.6989843  | 4.9589692  | 5.1943572  |
| 30.0                     | 0.16639672 | 0.94355470 | 1.7652211   | 2.4640888  | 3.0477983  | 3.5414626  | 3.9656659  | 4.3354487  | 4.6617202  | 4.9524692  | 5.2136511  | 5.4499542  |

TABLE 6.—Values of  $M_1^*$  at Cone Surface

| $\theta_s$<br>$M_\infty$ | 2.5       | 5.0       | 7.5       | 10.0      | 12.5      | 15.0      | 17.5      | 20.0      | 22.5      | 25.0      | 27.5      | 30.0      |
|--------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1.5                      | 1.3012260 | 1.2835878 | 1.2595946 | 1.2305622 | 1.1970898 | 1.1593432 | 1.1170748 | 1.0694952 | 1.0149458 |           |           |           |
| 2.0                      | 1.5037303 | 1.4867333 | 1.4642610 | 1.4376425 | 1.4074893 | 1.3740004 | 1.3370950 | 1.2964989 | 1.2517597 | 1.2022382 | 1.1470712 | 1.0842759 |
| 2.5                      | 1.6359693 | 1.6196819 | 1.5985179 | 1.5736696 | 1.5455825 | 1.5142955 | 1.4796254 | 1.4412784 | 1.3989057 | 1.3520868 | 1.3003063 | 1.2428212 |
| 3.0                      | 1.7242307 | 1.7087284 | 1.6888053 | 1.6654736 | 1.6389605 | 1.6091351 | 1.5757370 | 1.5384775 | 1.4970400 | 1.4510990 | 1.4002793 | 1.3440862 |
| 4.0                      | 1.8280078 | 1.8140159 | 1.7962266 | 1.7751913 | 1.7507597 | 1.7226194 | 1.6904727 | 1.6540650 | 1.6131777 | 1.5675777 | 1.5170303 | 1.4612019 |
| 5.0                      | 1.8830040 | 1.8702965 | 1.8541063 | 1.8345439 | 1.8112548 | 1.7838995 | 1.7522210 | 1.7160282 | 1.6751597 | 1.6294570 | 1.5787250 | 1.5227212 |
| 6.0                      | 1.9151672 | 1.9035036 | 1.8884543 | 1.8698073 | 1.8471422 | 1.8201539 | 1.7886441 | 1.7524699 | 1.7115119 | 1.6656475 | 1.6147126 | 1.5585001 |
| 8.0                      | 1.9490730 | 1.9389080 | 1.9252257 | 1.9075068 | 1.8853798 | 1.8586458 | 1.8271895 | 1.7909287 | 1.7497853 | 1.7036669 | 1.6524397 | 1.5959300 |
| 10.0                     | 1.9655767 | 1.9563652 | 1.9433663 | 1.9260268 | 1.9040767 | 1.8773920 | 1.8459037 | 1.8095538 | 1.7682810 | 1.7220083 | 1.6706130 | 1.6139316 |
| 12.5                     | 1.9765162 | 1.9680287 | 1.9554450 | 1.9382976 | 1.9164165 | 1.8897301 | 1.8581944 | 1.8217671 | 1.7803954 | 1.7340085 | 1.6824931 | 1.6256900 |
| 15.0                     | 1.9826347 | 1.9745735 | 1.9621863 | 1.9451149 | 1.9232510 | 1.8965492 | 1.8649777 | 1.8285009 | 1.7870698 | 1.7406159 | 1.6890305 | 1.6321573 |
| 17.5                     | 1.9864103 | 1.9786079 | 1.9663202 | 1.9492809 | 1.9274185 | 1.9007020 | 1.8691053 | 1.8325959 | 1.7911264 | 1.7446307 | 1.6930019 | 1.6360848 |
| 20.0                     | 1.9889078 | 1.9812673 | 1.9690331 | 1.9520079 | 1.9301429 | 1.9034145 | 1.8717998 | 1.8352677 | 1.7937726 | 1.7472489 | 1.6955910 | 1.6386452 |
| 22.5                     | 1.9906478 | 1.9831117 | 1.9709075 | 1.9538886 | 1.9320196 | 1.9052819 | 1.8736539 | 1.8371060 | 1.7955931 | 1.7490497 | 1.6973716 | 1.6404057 |
| 25.0                     | 1.9919093 | 1.9844420 | 1.9722557 | 1.9552394 | 1.9333667 | 1.9066216 | 1.8749838 | 1.8384244 | 1.7968983 | 1.7503407 | 1.6986482 | 1.6416675 |
| 27.5                     | 1.9928531 | 1.9854329 | 1.9732573 | 1.9562417 | 1.9343658 | 1.9076149 | 1.8759697 | 1.8394015 | 1.7978656 | 1.7512975 | 1.6995940 | 1.6426024 |
| 30.0                     | 1.9935782 | 1.9861904 | 1.9740215 | 1.9570058 | 1.9351271 | 1.9083715 | 1.8767206 | 1.8401457 | 1.7986020 | 1.7520261 | 1.7003145 | 1.6433145 |



TABLE 7.—Values of  $M$  at Cone Surface

| $\theta_s$<br>$M_\infty$ | 2.5       | 5.0       | 7.5       | 10.0      | 12.5      | 15.0      | 17.5      | 20.0      | 22.5      | 25.0      | 27.5      | 30.0      |
|--------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1.5                      | 1.4839205 | 1.4495506 | 1.4043568 | 1.3518877 | 1.2941311 | 1.2321577 | 1.1662947 | 1.0960925 | 1.0200789 |           |           |           |
| 2.0                      | 1.9752144 | 1.9249530 | 1.8616751 | 1.7909395 | 1.7157170 | 1.6375420 | 1.5571012 | 1.4746098 | 1.3899666 | 1.3028356 | 1.2126699 | 1.1174862 |
| 2.5                      | 2.4630341 | 2.3910819 | 2.3035354 | 2.2082811 | 2.1090693 | 2.0075866 | 1.9045626 | 1.8003500 | 1.6951701 | 1.5891076 | 1.4821032 | 1.3737603 |
| 3.0                      | 2.9470372 | 2.8476812 | 2.7302271 | 2.6051566 | 2.4767206 | 2.3466616 | 2.2159227 | 2.0852408 | 1.9551707 | 1.8261577 | 1.6984337 | 1.5719171 |
| 4.0                      | 3.9024425 | 3.7308486 | 3.5375549 | 3.3377767 | 3.1364791 | 2.9363532 | 2.7396556 | 2.5482541 | 2.3634960 | 2.1860455 | 2.0161145 | 1.8533224 |
| 5.0                      | 4.8395312 | 4.5727468 | 4.2831395 | 3.9896149 | 3.6991560 | 3.4171363 | 3.1477283 | 2.8935297 | 2.6555850 | 2.4337544 | 2.2270545 | 2.0340627 |
| 6.0                      | 5.7570168 | 5.3728796 | 4.9672548 | 4.5632398 | 4.1724637 | 3.8037709 | 3.4623047 | 3.1496536 | 2.8649743 | 2.6060444 | 2.3699496 | 2.1536669 |
| 8.0                      | 7.5304037 | 6.8479767 | 6.1565006 | 5.4966898 | 4.8941181 | 4.3594762 | 3.8918632 | 3.4845696 | 3.1290294 | 2.8168135 | 2.5403552 | 2.2932537 |
| 10.0                     | 9.2193237 | 8.1587526 | 7.1249086 | 6.1917076 | 5.3901391 | 4.7167624 | 4.1535407 | 3.6799588 | 3.2778260 | 2.9323237 | 2.6316616 | 2.3666615 |
| 12.5                     | 11.211498 | 9.5757001 | 8.0711305 | 6.8123823 | 5.8027583 | 4.9984721 | 4.3517276 | 3.8235291 | 3.3846686 | 3.0137849 | 2.6948567 | 2.4171325 |
| 15.0                     | 13.071864 | 10.766066 | 8.7844682 | 7.2424990 | 6.0720386 | 5.1747299 | 4.4720802 | 3.9088521 | 3.4471597 | 3.0608571 | 2.7314964 | 2.4458103 |
| 17.5                     | 14.802151 | 11.757101 | 9.3232929 | 7.5464393 | 6.2542253 | 5.2906164 | 4.5496874 | 3.9631243 | 3.4865125 | 3.0902848 | 2.7540913 | 2.4635597 |
| 20.0                     | 16.404611 | 12.578218 | 9.7336723 | 7.7662141 | 6.3818773 | 5.3702098 | 4.6022902 | 3.9995721 | 3.5127720 | 3.1098264 | 2.7690394 | 2.4752707 |
| 22.5                     | 17.882987 | 13.257983 | 10.049922 | 7.9288814 | 6.4741609 | 5.4269322 | 4.6394273 | 4.0251462 | 3.5311168 | 3.1234322 | 2.7794216 | 2.4833883 |
| 25.0                     | 19.241846 | 13.821449 | 10.296822 | 8.0519195 | 6.5427516 | 5.4686445 | 4.6665556 | 4.0437443 | 3.5444124 | 3.1332707 | 2.7869170 | 2.4892395 |
| 27.5                     | 20.486553 | 14.290335 | 10.492144 | 8.1468341 | 6.5949586 | 5.5001416 | 4.6869386 | 4.0576691 | 3.5543445 | 3.1406084 | 2.7924984 | 2.4935928 |
| 30.0                     | 21.624560 | 14.682282 | 10.648666 | 8.2213878 | 6.6355336 | 5.5244679 | 4.7026217 | 4.0683568 | 3.5619511 | 3.1462226 | 2.7967666 | 2.4969191 |

TABLE 8.— Values of  $\beta$  at Cone Surface

| $\theta_s$<br>$M_\infty$ | 2.5       | 5.0       | 7.5       | 10.0      | 12.5      | 15.0      | 17.5      | 20.0      | 22.5      | 25.0      | 27.5      | 30.0      |
|--------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1.5                      | 1.0963667 | 1.0493794 | .9860112  | .9097255  | .8214471  | .7198698  | .6002027  | .4487971  | .2013976  |           |           |           |
| 2.0                      | 1.7033707 | 1.6448234 | 1.5702974 | 1.4857538 | 1.3941610 | 1.2967436 | 1.1935510 | 1.0837315 | .9654051  | .8350931  | .6859798  | .4987739  |
| 2.5                      | 2.2508969 | 2.1719284 | 2.0751567 | 1.9688843 | 1.8569258 | 1.7408055 | 1.6209129 | 1.4970839 | 1.3687957 | 1.2350153 | 1.0939058 | .9419222  |
| 3.0                      | 2.7721883 | 2.6663249 | 2.5404999 | 2.4055854 | 2.2658652 | 2.1229274 | 1.9774513 | 1.8298167 | 1.6800870 | 1.5280222 | 1.3728354 | 1.2128162 |
| 4.0                      | 3.7721422 | 3.5943332 | 3.3932720 | 3.1844549 | 2.9727935 | 2.7608278 | 2.5506299 | 2.3438427 | 2.1415213 | 1.9439123 | 1.7506336 | 1.5603858 |
| 5.0                      | 4.7350884 | 4.4620638 | 4.1647670 | 3.8622567 | 3.5614260 | 3.2675405 | 2.9846597 | 2.7152374 | 2.4601081 | 2.2188196 | 1.9899176 | 1.7712738 |
| 6.0                      | 5.6695010 | 5.2789995 | 4.8655545 | 4.4523205 | 4.0508584 | 3.6699691 | 3.3147480 | 2.9866901 | 2.6847864 | 2.4065468 | 2.1486416 | 1.9074279 |
| 8.0                      | 7.4637109 | 6.7745690 | 6.0747427 | 5.4049606 | 4.7908655 | 4.2432338 | 3.7611965 | 3.3379972 | 2.9649325 | 2.6333322 | 2.3352525 | 2.0637375 |
| 10.0                     | 9.1649294 | 8.0972369 | 7.0543833 | 6.1104209 | 5.2965649 | 4.6095387 | 4.0313645 | 3.5414823 | 3.1215610 | 2.7565417 | 2.4342643 | 2.1450144 |
| 12.5                     | 11.166811 | 9.5233415 | 8.0089417 | 6.7385868 | 5.7159429 | 4.8974201 | 4.2352725 | 3.6904437 | 3.2335710 | 2.8430441 | 2.5024493 | 2.2005748 |
| 15.0                     | 13.033558 | 10.719523 | 8.7273640 | 7.1731299 | 5.9891279 | 5.0771872 | 4.3588418 | 3.7787729 | 3.2989256 | 2.8928958 | 2.5418640 | 2.2320367 |
| 17.5                     | 14.768334 | 11.714496 | 9.2695087 | 7.4798894 | 6.1737617 | 5.1952499 | 4.4384294 | 3.8348864 | 3.3400254 | 2.9240144 | 2.5661292 | 2.2514721 |
| 20.0                     | 16.374104 | 12.538404 | 9.6821697 | 7.7015635 | 6.3030436 | 5.2762821 | 4.4923351 | 3.8725414 | 3.3674273 | 2.9446596 | 2.5821656 | 2.2642803 |
| 22.5                     | 17.855005 | 13.220216 | 10.000047 | 7.8655680 | 6.3964646 | 5.3340035 | 4.5303737 | 3.8989488 | 3.3865596 | 2.9590250 | 2.5932960 | 2.2731514 |
| 25.0                     | 19.215844 | 13.785226 | 10.248149 | 7.9895812 | 6.4658795 | 5.3764368 | 4.5581510 | 3.9181460 | 3.4004204 | 2.9694082 | 2.6013278 | 2.2795424 |
| 27.5                     | 20.462133 | 14.255303 | 10.444381 | 8.0852277 | 6.5187023 | 5.4084709 | 4.5790167 | 3.9325155 | 3.4107718 | 2.9771498 | 2.6073065 | 2.2842954 |
| 30.0                     | 21.601426 | 14.648187 | 10.601608 | 8.1603442 | 6.5597489 | 5.4332076 | 4.5950681 | 3.9435424 | 3.4186979 | 2.9830716 | 2.6118773 | 2.2879259 |

TABLE 9.—Values of Surface Pressure Coefficient

| $\theta$<br>s<br>M <sub>∞</sub> | 2.5       | 5.0       | 7.5       | 10.0      | 12.5      | 15.0      | 17.5      | 20.0      | 22.5      | 25.0      | 27.5      | 30.0      |
|---------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1.5                             | .01238157 | .03974731 | .07763237 | .12441964 | .17944969 | .24257216 | .31404343 | .39462139 | .48608740 |           |           |           |
| 2.0                             | .01082030 | .03403726 | .06584322 | .10507434 | .15130962 | .20439671 | .26426546 | .33088792 | .40428109 | .48458190 | .57215750 | .66798613 |
| 2.5                             | .00986282 | .03068819 | .05925645 | .09481264 | .13716970 | .18626477 | .24200709 | .30430347 | .37299797 | .44792510 | .52898123 | .61614187 |
| 3.0                             | .00916654 | .02835194 | .05484940 | .08822328 | .12843367 | .17545428 | .22919518 | .28948460 | .35612768 | .42886317 | .50743954 | .59163058 |
| 4.0                             | .00818132 | .02522154 | .04926216 | .08027114 | .11831912 | .16337880 | .21531711 | .27391254 | .33886687 | .40986013 | .48655194 | .56853790 |
| 5.0                             | .00749521 | .02320131 | .04590193 | .07574813 | .11281914 | .15705456 | .20827392 | .26621579 | .33055321 | .40089940 | .47688856 | .55809305 |
| 6.0                             | .00698162 | .02179833 | .04370271 | .07291455 | .10949033 | .15332651 | .20421131 | .26185196 | .32589918 | .39595278 | .47161423 | .55244785 |
| 8.0                             | .00625987 | .02001345 | .04108811 | .06970333 | .10584562 | .14934950 | .19995789 | .25734967 | .32116293 | .39096277 | .46633454 | .54684114 |
| 10.0                            | .00577944 | .01896061 | .03965757 | .06803353 | .10401267 | .14739318 | .19790531 | .25520389 | .31891917 | .38862200 | .46388829 | .54425516 |
| 12.5                            | .00537105 | .01815901 | .03863402 | .06688271 | .10278001 | .14610235 | .19655929 | .25380866 | .31746977 | .38711581 | .46231011 | .54259484 |
| 15.0                            | .00509179 | .01766317 | .03803352 | .06622629 | .10208798 | .14538383 | .19581614 | .25304266 | .31668159 | .38629451 | .46144918 | .54169199 |
| 17.5                            | .00489221 | .01733627 | .03765288 | .06581810 | .10166373 | .14494484 | .19536483 | .25257767 | .31619658 | .38579429 | .46093267 | .54114662 |
| 20.0                            | .00474488 | .01711110 | .03739762 | .06554867 | .10138347 | .14465762 | .19506875 | .25227422 | .31588444 | .38547171 | .46059552 | .54079477 |
| 22.5                            | .00463302 | .01694931 | .03721867 | .06536076 | .10119010 | .14445890 | .19486596 | .25206510 | .31566738 | .38524975 | .46036209 | .54055237 |
| 25.0                            | .00454624 | .01683025 | .03708829 | .06522523 | .10105053 | .14431642 | .19472122 | .25191492 | .31551301 | .38508902 | .46020090 | .54037415 |
| 27.5                            | .00447841 | .01673957 | .03699106 | .06512469 | .10095024 | .14421195 | .19461283 | .25180636 | .31540011 | .38497583 | .46007538 | .54025160 |
| 30.0                            | .00442341 | .01666915 | .03691588 | .06504753 | .10086821 | .14413177 | .19453198 | .25171974 | .31531345 | .38488738 | .45998247 | .54015505 |

TABLE 10. — Shock Wave Results for Minimum Free-Stream Mach Number

| $\theta_s$ | $M_\infty$ | $\theta_w$ | $M_1^*$   | M         | $\psi_1$  | $P_w/P_\infty$ | $\rho_w/\rho_\infty$ | $T_w/T_\infty$ |
|------------|------------|------------|-----------|-----------|-----------|----------------|----------------------|----------------|
| 2.5        | 1.0134245  | 1.4099102  | 1.0095206 | 1.0127552 | .00007991 | 1.0008422      | 1.0005052            | 1.0003368      |
| 5.0        | 1.0423414  | 1.2918606  | 1.0283264 | 1.0383178 | .00081526 | 1.0051398      | 1.0030807            | 1.0020528      |
| 7.5        | 1.0814963  | 1.1961846  | 1.0504227 | 1.0690055 | .00331290 | 1.0162885      | 1.0097412            | 1.0064842      |
| 10.0       | 1.1289566  | 1.1187998  | 1.0719587 | 1.0996334 | .00914235 | 1.0392619      | 1.0233732            | 1.0155259      |
| 12.5       | 1.1837936  | 1.0579674  | 1.0900807 | 1.1259877 | .01997225 | 1.0800176      | 1.0472533            | 1.0312859      |
| 15.0       | 1.2456277  | 1.0121471  | 1.1031736 | 1.1453761 | .03700450 | 1.1446001      | 1.0843197            | 1.0555928      |
| 17.5       | 1.3145811  | .97946664  | 1.1109001 | 1.1569597 | .06064447 | 1.2388499      | 1.1367732            | 1.0897951      |
| 20.0       | 1.3913074  | .95786928  | 1.1138320 | 1.1613835 | .09055793 | 1.3689344      | 1.2061449            | 1.1349667      |
| 22.5       | 1.4771237  | .94538478  | 1.1129528 | 1.1600552 | .12597486 | 1.5426228      | 1.2936933            | 1.1924177      |
| 25.0       | 1.5742015  | .94030194  | 1.1092931 | 1.1545417 | .16598071 | 1.7710214      | 1.4007971            | 1.2642954      |
| 27.5       | 1.6858701  | .94121914  | 1.1037503 | 1.1462365 | .20969366 | 2.0710241      | 1.5292338            | 1.3542887      |
| 30.0       | 1.8171784  | .94702104  | 1.0970338 | 1.1362469 | .25634526 | 2.4694158      | 1.6813798            | 1.4686841      |

TABLE 11.—Values of Shock Wave Angle  $\theta_w$ 

| $\theta_w$<br>M <sub>∞</sub> | 2.5       | 5.0       | 7.5       | 10.0      | 12.5      | 15.0      | 17.5      | 20.0      | 22.5      | 25.0      | 27.5      | 30.0      |
|------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1.5                          | .72980881 | .73101837 | .73596156 | .74744381 | .76699745 | .79482573 | .83069723 | .87478556 | .92838226 |           |           |           |
| 2.0                          | .52372407 | .52560388 | .53286955 | .54806478 | .57114084 | .60086110 | .63603823 | .67588059 | .72000754 | .76841363 | .82155880 | .88061410 |
| 2.5                          | .41172479 | .41481444 | .42561089 | .44559290 | .47313974 | .50636184 | .54395503 | .58513707 | .62946333 | .67675234 | .72704583 | .78066448 |
| 3.0                          | .34017425 | .34490862 | .35959926 | .38392805 | .41518334 | .45133519 | .49116692 | .53395650 | .57930831 | .62701923 | .67705638 | .72956835 |
| 4.0                          | .25342878 | .26239745 | .28429378 | .31519220 | .35169780 | .39199816 | .43509833 | .48042115 | .52762536 | .57655303 | .62715304 | .67951018 |
| 5.0                          | .20275525 | .21643371 | .24390927 | .27919680 | .31910178 | .3620791  | .40729478 | .45427043 | .50273708 | .55256239 | .60373574 | .65632886 |
| 6.0                          | .16973546 | .18790453 | .21950683 | .25785279 | .30008977 | .34487812 | .39150335 | .43956962 | .48886566 | .53929635 | .59087580 | .64368523 |
| 8.0                          | .12995520 | .15547041 | .19254253 | .23479788 | .27993695 | .32691389 | .37520196 | .42453192 | .47477905 | .52590795 | .57796730 | .63105693 |
| 10.0                         | .10750390 | .13825079 | .17870819 | .22328402 | .27007188 | .31824681 | .36741930 | .41740905 | .46814787 | .51963622 | .57194500 | .62518789 |
| 12.5                         | .09079879 | .12604876 | .16921159 | .21555177 | .26354123 | .31256321 | .36234947 | .41279072 | .46386329 | .51559588 | .56807389 | .62142281 |
| 15.0                         | .08052229 | .11887137 | .16378697 | .21121192 | .25991410 | .30942741 | .35956438 | .41026139 | .46152193 | .51339190 | .56596518 | .61937439 |
| 17.5                         | .07371720 | .11430023 | .16040956 | .20854227 | .25769789 | .30751919 | .3578740  | .40872904 | .46010541 | .51205975 | .56469164 | .61813819 |
| 20.0                         | .06896481 | .11121585 | .15816997 | .20678689 | .25624724 | .30627341 | .35677233 | .40773150 | .45918399 | .51119379 | .56386419 | .61733530 |
| 22.5                         | .06550961 | .10904035 | .15661124 | .20557263 | .25524693 | .30541596 | .35601492 | .40704622 | .45855136 | .51059949 | .56329654 | .61678468 |
| 25.0                         | .06291769 | .10745092 | .15548418 | .20469853 | .25452847 | .30480093 | .35547207 | .40655534 | .45809837 | .51017410 | .56289036 | .61639069 |
| 27.5                         | .06092357 | .10625568 | .15464345 | .20404875 | .25399524 | .30434491 | .35506987 | .40619178 | .45776297 | .50985917 | .56258965 | .61609919 |
| 30.0                         | .05935702 | .10533512 | .15400006 | .20355278 | .25358886 | .30399757 | .35476362 | .40591503 | .45750773 | .50961956 | .56236093 | .61587735 |

TABLE 12.—Values of  $P_w/P_\infty$ 

| $\theta_\infty$<br>$M_\infty$ | 2.5       | 5.0       | 7.5       | 10.0      | 12.5      | 15.0      | 17.5      | 20.0      | 22.5      | 25.0      | 27.5      | 30.0      |
|-------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1.5                           | 1.0002246 | 1.0036075 | 1.0174289 | 1.0496056 | 1.1045062 | 1.1827500 | 1.2834747 | 1.4062921 | 1.5529393 |           |           |           |
| 2.0                           | 1.0005380 | 1.0086899 | 1.0403452 | 1.1073825 | 1.2111912 | 1.3481199 | 1.5142530 | 1.7067746 | 1.9239522 | 2.1650910 | 2.4306541 | 2.7231967 |
| 2.5                           | 1.0012002 | 1.0189394 | 1.0817750 | 1.2012029 | 1.3722278 | 1.5876841 | 1.8424208 | 2.1332006 | 2.4576638 | 2.8140839 | 3.2014096 | 3.6192131 |
| 3.0                           | 1.0023837 | 1.0360852 | 1.1431172 | 1.3283669 | 1.5803502 | 1.8902242 | 2.2526594 | 2.6640073 | 3.1215918 | 3.6228746 | 4.1656833 | 4.7482227 |
| 4.0                           | 1.0072479 | 1.0957315 | 1.3233675 | 1.6719940 | 2.1235040 | 2.6690262 | 3.3032398 | 4.0217040 | 4.8198947 | 5.6934154 | 6.6378355 | 7.6480303 |
| 5.0                           | 1.0171670 | 1.1911379 | 1.5725388 | 2.1233306 | 2.8255059 | 3.6709887 | 4.6536354 | 5.7672309 | 7.0049211 | 8.3590404 | 9.8221880 | 11.386284 |
| 6.0                           | 1.0340527 | 1.3202453 | 1.8836342 | 2.6762168 | 3.6822436 | 4.8934974 | 6.3021363 | 7.8991925 | 9.6746510 | 11.617167 | 13.715649 | 15.957978 |
| 8.0                           | 1.0935009 | 1.6681306 | 2.6793089 | 4.0799113 | 5.8571353 | 7.9995934 | 10.493470 | 13.822500 | 16.468640 | 19.910359 | 23.627200 | 27.597711 |
| 10.0                          | 1.1890636 | 2.1239850 | 3.6997728 | 5.8791236 | 8.6478692 | 11.988299 | 15.878899 | 20.292938 | 25.201692 | 30.572215 | 36.371761 | 42.564931 |
| 12.5                          | 1.3558194 | 2.8367954 | 5.2891532 | 8.6850988 | 13.004161 | 18.217984 | 24.291306 | 31.182797 | 38.846487 | 47.231127 | 56.284410 | 65.951305 |
| 15.0                          | 1.5696388 | 3.7055199 | 7.2276605 | 12.111312 | 18.326038 | 25.830053 | 34.571733 | 44.491717 | 55.523719 | 67.591960 | 80.621749 | 94.534687 |
| 17.5                          | 1.8265357 | 4.7295527 | 9.5161021 | 16.158625 | 24.614296 | 34.825167 | 46.720898 | 60.220062 | 75.231152 | 91.653857 | 109.38495 | 128.31514 |
| 20.0                          | 2.1242948 | 5.9090435 | 12.154928 | 20.827506 | 31.869090 | 45.203824 | 60.738596 | 78.367599 | 97.971214 | 119.41817 | 142.57244 | 167.29318 |
| 22.5                          | 2.4618391 | 7.2442691 | 15.144636 | 26.118207 | 40.090632 | 56.965658 | 76.625125 | 98.934462 | 123.74249 | 150.88414 | 180.18429 | 211.46791 |
| 25.0                          | 2.8385942 | 8.7354270 | 18.485287 | 32.030994 | 49.279274 | 70.111151 | 94.380913 | 121.92116 | 152.54611 | 186.05129 | 222.22413 | 260.83729 |
| 27.5                          | 3.2543623 | 10.382736 | 22.177224 | 38.565895 | 59.436583 | 84.640855 | 114.00537 | 147.32864 | 184.38224 | 224.92340 | 268.68518 | 315.40878 |
| 30.0                          | 3.7090181 | 12.186204 | 26.220307 | 45.722722 | 70.557949 | 100.55374 | 135.49959 | 175.15339 | 219.24952 | 267.49611 | 319.57361 | 375.17550 |

TABLE 13.—Values of  $\rho_w/\rho_\infty$ 

| $\frac{\theta}{s}$<br>$M_\infty$ | 2.5       | 5.0       | 7.5       | 10.0      | 12.5      | 15.0      | 17.5      | 20.0      | 22.5      | 25.0      | 27.5      | 30.0      |
|----------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1.5                              | 1.0001348 | 1.0021629 | 1.0104196 | 1.0294704 | 1.0614187 | 1.1057814 | 1.1609558 | 1.2254501 | 1.2987210 |           |           |           |
| 2.0                              | 1.0003228 | 1.0052048 | 1.0159493 | 1.0630736 | 1.1215769 | 1.1952717 | 1.2797702 | 1.3715362 | 1.4678951 | 1.5669314 | 1.6674045 | 1.7688972 |
| 2.5                              | 1.0007200 | 1.0113205 | 1.0482745 | 1.1160493 | 1.2078577 | 1.3155174 | 1.4325605 | 1.5542807 | 1.6771604 | 1.7986546 | 1.9170477 | 2.0312615 |
| 3.0                              | 1.0014295 | 1.0214956 | 1.0834791 | 1.1848745 | 1.3119895 | 1.4533965 | 1.6010051 | 1.7490815 | 1.8937035 | 2.0322071 | 2.1630073 | 2.2853238 |
| 4.0                              | 1.0043424 | 1.0563587 | 1.1822308 | 1.3554190 | 1.5504081 | 1.7507761 | 1.9460891 | 2.1300377 | 2.2992566 | 2.4525076 | 2.5898816 | 2.7121650 |
| 5.0                              | 1.0102647 | 1.1104578 | 1.3082216 | 1.5503387 | 1.8023382 | 2.0445488 | 2.2665831 | 2.4642018 | 2.6369139 | 2.7862459 | 2.9147133 | 3.0250242 |
| 6.0                              | 1.0202930 | 1.1805772 | 1.4505443 | 1.7531978 | 2.0474135 | 2.3133309 | 2.5439366 | 2.7393452 | 2.9030056 | 3.0394360 | 3.1532016 | 3.2483253 |
| 8.0                              | 1.0550696 | 1.3536165 | 1.7542379 | 2.1435080 | 2.4782083 | 2.7498920 | 2.9649732 | 3.1339860 | 3.2670749 | 3.3725531 | 3.4569473 | 3.5251678 |
| 10.0                             | 1.1093027 | 1.5506005 | 2.0518585 | 2.4815951 | 2.8139603 | 3.0617301 | 3.2453357 | 3.3824322 | 3.4862196 | 3.5660084 | 3.6283315 | 3.6777439 |
| 12.5                             | 1.1993037 | 1.8059670 | 2.3851665 | 2.8174408 | 3.1177757 | 3.3247707 | 3.4696914 | 3.5735375 | 3.6497897 | 3.7070818 | 3.7510487 | 3.7854318 |
| 15.0                             | 1.3068201 | 2.0533114 | 2.6639528 | 3.0688930 | 3.3280379 | 3.4970391 | 3.6109938 | 3.6905426 | 3.7478691 | 3.7903455 | 3.8226044 | 3.8476313 |
| 17.5                             | 1.4255611 | 2.2816569 | 2.8901390 | 3.2558056 | 3.4756757 | 3.6135320 | 3.7041367 | 3.7662963 | 3.8105453 | 3.8430468 | 3.8675677 | 3.8864932 |
| 20.0                             | 1.5507244 | 2.4861795 | 3.0714064 | 3.3957260 | 3.5816943 | 3.6950191 | 3.7681670 | 3.8177538 | 3.8527612 | 3.8783216 | 3.8975196 | 3.9122877 |
| 22.5                             | 1.6786613 | 2.6659260 | 3.2163973 | 3.5018497 | 3.6596677 | 3.7538289 | 3.8138183 | 3.8541376 | 3.8824355 | 3.9030110 | 3.9184163 | 3.9302396 |
| 25.0                             | 1.8065441 | 2.8221135 | 3.3327960 | 3.5835733 | 3.7183363 | 3.7974671 | 3.8473933 | 3.8807372 | 3.9040391 | 3.9209301 | 3.9335493 | 3.9432159 |
| 27.5                             | 1.9322513 | 2.9570055 | 3.4268753 | 3.6474822 | 3.7634117 | 3.8306410 | 3.8727471 | 3.9007358 | 3.9202310 | 3.9343311 | 3.9448459 | 3.9528919 |
| 30.0                             | 2.0541947 | 3.0732004 | 3.5035323 | 3.6982003 | 3.7986799 | 3.8563944 | 3.8923313 | 3.9161295 | 3.9326659 | 3.9446049 | 3.9534964 | 3.9602936 |

TABLE 14.—Values of  $T_w/T_\infty$

| $\theta_s$<br>$M_\infty$ | 2.5       | 5.0       | 7.5       | 10.0      | 12.5      | 15.0      | 17.5      | 20.0      | 22.5      | 25.0      | 27.5      | 30.0      |
|--------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1.5                      | 1.0000898 | 1.0014415 | 1.0069350 | 1.0195588 | 1.0405942 | 1.0696056 | 1.1055328 | 1.1475719 | 1.1957451 |           |           |           |
| 2.0                      | 1.0002152 | 1.0034671 | 1.0159493 | 1.0416800 | 1.0799003 | 1.1278773 | 1.1832225 | 1.2444255 | 1.3106878 | 1.3817395 | 1.4577471 | 1.5394884 |
| 2.5                      | 1.0004799 | 1.0075336 | 1.0319578 | 1.0762991 | 1.1360840 | 1.2068895 | 1.2861032 | 1.3724680 | 1.4653719 | 1.5645493 | 1.6699687 | 1.7817564 |
| 3.0                      | 1.0009528 | 1.0142826 | 1.0550432 | 1.1211034 | 1.2045449 | 1.3005564 | 1.4070282 | 1.5230893 | 1.6484058 | 1.7827290 | 1.9258757 | 2.0777024 |
| 4.0                      | 1.0028930 | 1.0372722 | 1.1193817 | 1.2335624 | 1.3696420 | 1.5244829 | 1.6973733 | 1.8880905 | 2.0962840 | 2.3214669 | 2.5629880 | 2.8198986 |
| 5.0                      | 1.0068321 | 1.0726548 | 1.2020432 | 1.3695914 | 1.5676890 | 1.7955007 | 2.0531501 | 2.3404053 | 2.6564846 | 3.0001086 | 3.3698642 | 3.7640306 |
| 6.0                      | 1.0134860 | 1.1183049 | 1.2985706 | 1.5264774 | 1.7984856 | 2.1153469 | 2.4773166 | 2.8836061 | 3.3326326 | 3.8221454 | 4.3497534 | 4.9126785 |
| 8.0                      | 1.0364254 | 1.2323509 | 1.5273349 | 1.9033804 | 2.3634556 | 2.9090573 | 3.5391450 | 4.2509763 | 5.0407904 | 5.9036458 | 6.8347006 | 7.8287653 |
| 10.0                     | 1.0719018 | 1.3697823 | 1.8031326 | 2.3690906 | 3.0732023 | 3.9155310 | 4.8928372 | 5.9995105 | 7.2289457 | 8.5732315 | 10.024377 | 11.573653 |
| 12.5                     | 1.1305054 | 1.5707903 | 2.2175195 | 3.0826198 | 4.1709737 | 5.4794709 | 7.0009989 | 8.7260303 | 10.643486 | 12.740784 | 15.004979 | 17.422400 |
| 15.0                     | 1.2011132 | 1.8046556 | 2.7131338 | 3.9464759 | 5.5065591 | 7.3862637 | 9.5740217 | 12.055603 | 14.814743 | 17.832664 | 21.090790 | 24.569581 |
| 17.5                     | 1.2812749 | 2.0728589 | 3.2926105 | 4.9630189 | 7.0818736 | 9.6374313 | 12.613168 | 15.989199 | 19.742883 | 23.849269 | 28.282620 | 33.015659 |
| 20.0                     | 1.3698726 | 2.3767566 | 3.9574471 | 6.1334470 | 8.8977695 | 12.233719 | 16.118870 | 20.527149 | 25.428831 | 30.791198 | 36.580300 | 42.760959 |
| 22.5                     | 1.4665491 | 2.7173556 | 4.7085714 | 7.4584032 | 10.954719 | 15.175347 | 20.091446 | 25.669675 | 31.872389 | 38.658394 | 45.983959 | 53.805350 |
| 25.0                     | 1.5712842 | 3.0953493 | 5.5464803 | 8.9382834 | 13.253044 | 18.462609 | 24.531132 | 31.417011 | 39.073919 | 47.450804 | 56.494559 | 66.148365 |
| 27.5                     | 1.6842335 | 3.5112331 | 6.4715584 | 10.573292 | 15.793272 | 22.095742 | 29.437855 | 37.769448 | 47.033515 | 57.169415 | 68.110437 | 79.791904 |
| 30.0                     | 1.8055825 | 3.9653138 | 7.4839633 | 12.363506 | 18.574334 | 26.074549 | 34.811936 | 44.726149 | 55.750863 | 67.813156 | 80.833161 | 94.734263 |



TABLE 15.— Values of  $M_1^*$  Immediately Behind Shock Wave

| $\theta_s$<br>$M_\infty$ | 2.5       | 5.0       | 7.5       | 10.0      | 12.5      | 15.0      | 17.5      | 20.0      | 22.5      | 25.0      | 27.5      | 30.0      |
|--------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1.5                      | 1.3092224 | 1.3080425 | 1.3032316 | 1.2904416 | 1.2733757 | 1.2470647 | 1.2136976 | 1.1734417 | 1.1255577 |           |           |           |
| 2.0                      | 1.5117226 | 1.5098783 | 1.5027737 | 1.4880259 | 1.4658470 | 1.4375229 | 1.4041357 | 1.3662662 | 1.3240414 | 1.2772250 | 1.2251608 | 1.1665716 |
| 2.5                      | 1.6437849 | 1.6409958 | 1.6313144 | 1.6135872 | 1.5893723 | 1.5602125 | 1.5269254 | 1.4897888 | 1.4487782 | 1.4036693 | 1.3540875 | 1.2994294 |
| 3.0                      | 1.7317536 | 1.7279011 | 1.7160661 | 1.6967113 | 1.6719435 | 1.6429817 | 1.6102557 | 1.5738072 | 1.5334814 | 1.4890416 | 1.4401789 | 1.3864688 |
| 4.0                      | 1.8347998 | 1.8288745 | 1.8146416 | 1.7946642 | 1.7705596 | 1.7427255 | 1.7111125 | 1.6755482 | 1.6358417 | 1.5917767 | 1.5431377 | 1.4896284 |
| 5.0                      | 1.8890169 | 1.8815355 | 1.8667430 | 1.8474118 | 1.8242902 | 1.7973345 | 1.7663509 | 1.7311545 | 1.6915821 | 1.6474801 | 1.5986684 | 1.5449348 |
| 6.0                      | 1.9204255 | 1.9120102 | 1.8974510 | 1.8788824 | 1.8564793 | 1.8300349 | 1.7993506 | 1.7642724 | 1.7246756 | 1.6804445 | 1.6314313 | 1.5774585 |
| 8.0                      | 1.9530080 | 1.9440026 | 1.9303670 | 1.9128436 | 1.8911846 | 1.8651727 | 1.8346727 | 1.7995939 | 1.7598609 | 1.7153926 | 1.6660755 | 1.6117649 |
| 10.0                     | 1.9684962 | 1.9596626 | 1.9467393 | 1.9297314 | 1.9083598 | 1.8824724 | 1.8519878 | 1.8168468 | 1.7769958 | 1.7323717 | 1.6828735 | 1.6283668 |
| 12.5                     | 1.9785525 | 1.9701513 | 1.9577454 | 1.9410267 | 1.9197867 | 1.8939350 | 1.8634238 | 1.8282152 | 1.7882669 | 1.7435234 | 1.6938931 | 1.6392467 |
| 15.0                     | 1.9840964 | 1.9760760 | 1.9639413 | 1.9473466 | 1.9261505 | 1.9002982 | 1.8697584 | 1.8345025 | 1.7944932 | 1.7496780 | 1.6999703 | 1.6452429 |
| 17.5                     | 1.9874950 | 1.9797532 | 1.9677642 | 1.9512262 | 1.9300446 | 1.9041837 | 1.8736212 | 1.8383326 | 1.7982832 | 1.7534227 | 1.7036663 | 1.6488883 |
| 20.0                     | 1.9897394 | 1.9821917 | 1.9702843 | 1.9537738 | 1.9325957 | 1.9067257 | 1.8761460 | 1.8408346 | 1.8007580 | 1.7558669 | 1.7060781 | 1.6512666 |
| 22.5                     | 1.9913048 | 1.9838910 | 1.9720310 | 1.9555343 | 1.9343557 | 1.9078688 | 1.8778852 | 1.8425572 | 1.8024614 | 1.7575489 | 1.7077375 | 1.6529026 |
| 25.0                     | 1.9924427 | 1.9851217 | 1.9732904 | 1.9568007 | 1.9356204 | 1.9097357 | 1.8791333 | 1.8437932 | 1.8036833 | 1.7587553 | 1.7089275 | 1.6540757 |
| 27.5                     | 1.9932970 | 1.9860411 | 1.9742277 | 1.9577417 | 1.9365592 | 1.9106691 | 1.8800590 | 1.8447097 | 1.8045892 | 1.7596495 | 1.7098095 | 1.6549451 |
| 30.0                     | 1.9939552 | 1.9867457 | 1.9749439 | 1.9584596 | 1.9372749 | 1.9113804 | 1.8807644 | 1.8454078 | 1.8052793 | 1.7603307 | 1.7104813 | 1.6556073 |

TABLE 16. — Values of  $M$  Immediately Behind Shock Wave

| $\theta$<br>$M_\infty$ | 2.5       | 5.0       | 7.5       | 10.0      | 12.5      | 15.0      | 17.5      | 20.0      | 22.5      | 25.0      | 27.5      | 30.0      |
|------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1.5                    | 1.4998414 | 1.4974785 | 1.4878933 | 1.4627864 | 1.4301024 | 1.3814265 | 1.3224396 | 1.2549363 | 1.1792343 |           |           |           |
| 2.0                    | 1.9996199 | 1.9939426 | 1.9723272 | 1.9286999 | 1.8660294 | 1.7906313 | 1.7076458 | 1.6202152 | 1.5299336 | 1.4373954 | 1.3423767 | 1.2437833 |
| 2.5                    | 2.4991212 | 2.4861212 | 2.4420343 | 2.3652144 | 2.2675879 | 2.1597074 | 2.0474983 | 1.9338296 | 1.8200067 | 1.7065278 | 1.5934465 | 1.4803731 |
| 3.0                    | 2.9980922 | 2.9717015 | 2.8937720 | 2.7755617 | 2.6386154 | 2.4953634 | 2.3513046 | 2.2087882 | 2.0687697 | 1.9316526 | 1.7974962 | 1.6660333 |
| 4.0                    | 3.9931281 | 3.9137264 | 3.7381239 | 3.5217276 | 3.2973126 | 3.0762401 | 2.8624788 | 2.6576504 | 2.4624536 | 2.2769347 | 2.1008154 | 1.9333619 |
| 5.0                    | 4.9809565 | 4.8065906 | 4.5048450 | 4.1766123 | 3.8549501 | 3.5488829 | 3.2615296 | 2.9939536 | 2.7459676 | 2.5165583 | 2.3041361 | 2.1068770 |
| 6.0                    | 5.9565954 | 5.6457087 | 5.1993110 | 4.7485583 | 4.3226091 | 3.9289630 | 3.5697243 | 3.2441907 | 2.9500024 | 2.6839743 | 2.4425573 | 2.223235  |
| 8.0                    | 7.8515136 | 7.1670694 | 6.3927039 | 5.6745166 | 5.0347108 | 4.4756690 | 3.9913822 | 3.5722595 | 3.2080923 | 2.8894731 | 2.6082320 | 2.3575861 |
| 10.0                   | 9.6482949 | 8.4967345 | 7.3568163 | 6.3621299 | 5.5240895 | 4.8275375 | 4.2486780 | 3.7640472 | 3.3538611 | 3.0023754 | 2.6972392 | 2.4289206 |
| 12.5                   | 11.741632 | 9.9187771 | 8.2954492 | 6.9757203 | 5.9313282 | 5.1052066 | 4.4437483 | 3.9051353 | 3.4586615 | 3.0821043 | 2.7592170 | 2.4780382 |
| 15.0                   | 13.668301 | 11.105851 | 9.0019713 | 7.4008900 | 6.1971941 | 5.2790393 | 4.5622923 | 3.9890472 | 3.5200057 | 3.1282115 | 2.7947258 | 2.5059719 |
| 17.5                   | 15.438960 | 12.090914 | 9.5353243 | 7.7013563 | 6.3771445 | 5.3933782 | 4.6387655 | 4.0424422 | 3.5586532 | 3.1570489 | 2.8168099 | 2.5232687 |
| 20.0                   | 17.064140 | 12.905739 | 9.9414819 | 7.9186715 | 6.5032468 | 5.4719224 | 4.6906084 | 4.0783143 | 3.5844505 | 3.1762045 | 2.8314267 | 2.5346850 |
| 22.5                   | 18.553711 | 13.579621 | 10.254443 | 8.0795156 | 6.5944250 | 5.5082724 | 4.7272217 | 4.1034866 | 3.6024729 | 3.1895436 | 2.8415801 | 2.5426172 |
| 25.0                   | 19.916596 | 14.138048 | 10.498785 | 8.2011840 | 6.6622022 | 5.5690823 | 4.7539669 | 4.1217938 | 3.6155376 | 3.1991912 | 2.8489106 | 2.5483062 |
| 27.5                   | 21.161263 | 14.602515 | 10.692081 | 8.2950739 | 6.7137983 | 5.6001783 | 4.7740641 | 4.1355038 | 3.6252985 | 3.2063859 | 2.8543706 | 2.5525524 |
| 30.0                   | 22.295945 | 14.990690 | 10.846998 | 8.3688177 | 6.7538964 | 5.6242027 | 4.7895306 | 4.1460251 | 3.6327775 | 3.2118921 | 2.8585447 | 2.5557963 |

TABLE 17.—Values of  $\psi_1$  Immediately Behind Shock Wave

| $\theta_s$<br>$M_\infty$ | 2.5       | 5.0       | 7.5       | 10.0      | 12.5      | 15.0      | 17.5      | 20.0      | 22.5      | 25.0      | 27.5      | 30.0      |
|--------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1.5                      | .00006701 | .00107383 | .00515486 | .01446251 | .02973289 | .05023022 | .07454307 | .10117308 | .12870234 |           |           |           |
| 2.0                      | .00013976 | .00225022 | .01032315 | .02681156 | .05086750 | .08020943 | .11271599 | .14682324 | .18142133 | .21568102 | .24887916 | .28022521 |
| 2.5                      | .00026394 | .00413625 | .01745258 | .04121277 | .07226349 | .10739405 | .14446347 | .18219549 | .21979097 | .25671795 | .29256720 | .32693271 |
| 3.0                      | .00044906 | .00671197 | .02561754 | .05534457 | .09104895 | .12943766 | .16873094 | .20798386 | .24669249 | .28453176 | .32125733 | .35662494 |
| 4.0                      | .00104970 | .01341299 | .04198285 | .07911609 | .11929249 | .16012546 | .20064938 | .24046970 | .27940843 | .31737839 | .35428888 | .39001580 |
| 5.0                      | .00200491 | .02095580 | .05592455 | .09634470 | .13780122 | .17889347 | .21920586 | .25863433 | .29715829 | .33475873 | .37140356 | .40700440 |
| 6.0                      | .00331333 | .02821262 | .06689724 | .10854783 | .15009056 | .19081958 | .23063218 | .26955985 | .30764114 | .34488063 | .38125695 | .41668935 |
| 8.0                      | .00671268 | .04019374 | .08186143 | .12366029 | .16444755 | .20422643 | .24313756 | .28128831 | .31873304 | .35547262 | .39147682 | .42666094 |
| 10.0                     | .01052277 | .04875854 | .09089961 | .13203638 | .17200810 | .21105834 | .24937062 | .28704328 | .32411318 | .36056605 | .39635822 | .43139731 |
| 12.5                     | .01502579 | .05599584 | .09770545 | .13799410 | .17721482 | .21567107 | .25352425 | .29084432 | .32764407 | .36389316 | .39953446 | .43446998 |
| 15.0                     | .01885008 | .06077006 | .10182794 | .14145974 | .18017770 | .21826168 | .25583768 | .29294940 | .32959180 | .36572299 | .40127726 | .43615287 |
| 17.5                     | .02195856 | .06402802 | .10448456 | .14363615 | .18201344 | .21985419 | .25725281 | .29423282 | .33077642 | .36683407 | .40233419 | .43717239 |
| 20.0                     | .02445092 | .06632702 | .10628520 | .14508598 | .18322555 | .22090043 | .25817959 | .29507157 | .33154953 | .36755840 | .40302258 | .43783596 |
| 22.5                     | .02644858 | .06799903 | .10755708 | .14609767 | .18406625 | .22162358 | .25881882 | .29564928 | .33208149 | .36805645 | .40349567 | .43829180 |
| 25.0                     | .02805809 | .06924764 | .10848637 | .14683042 | .18467251 | .22214381 | .25927801 | .29606386 | .33246297 | .36841341 | .40383470 | .43861831 |
| 27.5                     | .02936506 | .07020189 | .10918490 | .14737756 | .18512383 | .22253035 | .25961879 | .29637132 | .33274575 | .36867794 | .40408575 | .43886016 |
| 30.0                     | .03043553 | .07094592 | .10972253 | .14779659 | .18546853 | .22282524 | .25987858 | .29660556 | .33296113 | .36887935 | .40427693 | .43904418 |

**Microfiche supplement for**

**NASA SP-3078**

**This supplement consists of tables 18 through 230 of  
TABLES FOR SUPERSONIC FLOW OF HELIUM  
AROUND RIGHT CIRCULAR CONES AT ZERO ANGLE  
OF ATTACK (NASA SP-3078), by Joseph L. Sims, George  
C. Marshall Space Flight Center, Huntsville, Alabama.**

TABLE 18. CONICAL FLOWFIELD  $\theta_s = 2.5$  DEG;  $M_\infty = 1.0134245$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .50000938+00 | .10134245+01 | .43633230-01 | .14099102+01 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .43633230-01 | .10040600+01 | .43633230-01 | .11451883+02 | .50000000+00 |
| .78539796-01 | .10004621+01 | .24228014-01 | .11447169+02 | .90091149+00 |
| .11344636+00 | .10010129+01 | .16746539-01 | .11456981+02 | .13053576+01 |
| .14835293+00 | .10014711+01 | .12773152-01 | .11474613+02 | .17148917+01 |
| .18325949+00 | .10018530+01 | .10303808-01 | .11497581+02 | .21309497+01 |
| .21816606+00 | .10021789+01 | .86167865-02 | .11524716+02 | .25549669+01 |
| .25307263+00 | .10024633+01 | .73884428-02 | .11555402+02 | .29884287+01 |
| .28797919+00 | .10027162+01 | .64520985-02 | .11589318+02 | .34329105+01 |
| .31939510+00 | .10029229+01 | .57798848-02 | .11622479+02 | .38437654+01 |
| .35081101+00 | .10031136+01 | .52241534-02 | .11658112+02 | .42662609+01 |
| .38222692+00 | .10032912+01 | .47561228-02 | .11696253+02 | .47018611+01 |
| .41364283+00 | .10034580+01 | .43559186-02 | .11736967+02 | .51521744+01 |
| .44505874+00 | .10036157+01 | .40089861-02 | .11780447+02 | .56189815+01 |
| .47647465+00 | .10037660+01 | .37048757-02 | .11826805+02 | .61042657+01 |
| .50789049+00 | .10039099+01 | .34354553-02 | .11876284+02 | .66102496+01 |
| .53581551+00 | .10040333+01 | .32201409-02 | .11923099+02 | .70794087+01 |
| .56374052+00 | .10041532+01 | .30241162-02 | .11972813+02 | .75688939+01 |
| .59166554+00 | .10042701+01 | .28446093-02 | .12025687+02 | .80809071+01 |
| .61959055+00 | .10043844+01 | .26793107-02 | .12082026+02 | .86180010+01 |
| .64751557+00 | .10044967+01 | .25263950-02 | .12142181+02 | .91830386+01 |
| .67544058+00 | .10046074+01 | .23842454-02 | .12206563+02 | .97792639+01 |
| .70336559+00 | .10047169+01 | .22516549-02 | .12275651+02 | .10410465+02 |
| .72779998+00 | .10048118+01 | .21424815-02 | .12340401+02 | .10994845+02 |
| .75223437+00 | .10049064+01 | .20390674-02 | .12409616+02 | .11612654+02 |
| .77666876+00 | .10050008+01 | .19407943-02 | .12483800+02 | .12267726+02 |
| .80110314+00 | .10050952+01 | .18472150-02 | .12563540+02 | .12964490+02 |
| .82553753+00 | .10051899+01 | .17578676-02 | .12649517+02 | .13708062+02 |
| .84997192+00 | .10052851+01 | .16723350-02 | .12742533+02 | .14504421+02 |
| .87440631+00 | .10053810+01 | .15902817-02 | .12843535+02 | .15360581+02 |
| .89535007+00 | .10054641+01 | .15224014-02 | .12937311+02 | .16148277+02 |
| .91629383+00 | .10055481+01 | .14568716-02 | .13038612+02 | .16992109+02 |
| .93723759+00 | .10056331+01 | .13931990-02 | .13140423+02 | .17899251+02 |
| .95818136+00 | .10057195+01 | .13313442-02 | .13267903+02 | .18878140+02 |
| .97912511+00 | .10058073+01 | .12711585-02 | .13398434+02 | .19938775+02 |
| .10000689+01 | .10058970+01 | .12125373-02 | .13541675+02 | .21093104+02 |
| .10210123+01 | .10059885+01 | .11549443-02 | .13699631+02 | .22355498+02 |
| .10384651+01 | .10060665+01 | .11079609-02 | .13844255+02 | .23502569+02 |
| .10559179+01 | .10061462+01 | .10617971-02 | .14002504+02 | .24748981+02 |
| .10733708+01 | .10062276+01 | .10163635-02 | .14174438+02 | .26109334+02 |
| .10908236+01 | .10063116+01 | .97164512-03 | .14368554+02 | .27601253+02 |

TABLE 18. (Concluded)

$$M_{\infty} = .10134245+01$$

$$\Theta_s = .43633230-01$$

| $\underline{\Theta}$ | $\underline{M_1^*}$ | $\underline{\psi_1}$ | $\underline{x}$ | $\underline{r}$ |
|----------------------|---------------------|----------------------|-----------------|-----------------|
| .11082765+01         | .10063977+01        | .92755258-03         | .14581904+02    | .29246216+02    |
| .11257293+01         | .10064865+01        | .88405609-03         | .14820266+02    | .31070687+02    |
| .11431821+01         | .10065783+01        | .84106624-03         | .15088364+02    | .33107645+02    |
| .11571444+01         | .10066541+01        | .80700219-03         | .15328229+02    | .34917836+02    |
| .11711067+01         | .10067323+01        | .77317655-03         | .15594766+02    | .36917027+02    |
| .11850689+01         | .10068131+01        | .73957443-03         | .15892722+02    | .39137973+02    |
| .11990312+01         | .10068967+01        | .70613623-03         | .16228041+02    | .41621543+02    |
| .12129935+01         | .10069836+01        | .67281723-03         | .16608267+02    | .44419425+02    |
| .12269557+01         | .10070741+01        | .63957274-03         | .17043125+02    | .47597993+02    |
| .12409180+01         | .10071686+01        | .60634315-03         | .17545369+02    | .51243975+02    |
| .12513897+01         | .10072425+01        | .58139861-03         | .17976335+02    | .54353344+02    |
| .12618614+01         | .10073192+01        | .55636466-03         | .18464091+02    | .57853318+02    |
| .12723331+01         | .10073991+01        | .53124130-03         | .19020723+02    | .61825207+02    |
| .12828048+01         | .10074826+01        | .50595403-03         | .19662028+02    | .66374923+02    |
| .12932765+01         | .10075701+01        | .48044324-03         | .20409063+02    | .71643186+02    |
| .13037482+01         | .10076621+01        | .45467913-03         | .21290550+02    | .77821250+02    |
| .13142199+01         | .10077595+01        | .42851269-03         | .22346740+02    | .85176194+02    |
| .13212011+01         | .10078277+01        | .41081011-03         | .23175673+02    | .90916779+02    |
| .13281822+01         | .10078990+01        | .39286911-03         | .24131421+02    | .97504954+02    |
| .13351633+01         | .10079737+01        | .37458539-03         | .25245907+02    | .10515049+03    |
| .13421445+01         | .10080524+01        | .35595894-03         | .26562887+02    | .11414010+03    |
| .13491256+01         | .10081356+01        | .33685565-03         | .28144090+02    | .12487707+03    |
| .13561067+01         | .10082241+01        | .31720102-03         | .30079641+02    | .13794834+03    |
| .13630879+01         | .10083189+01        | .29683113-03         | .32506777+02    | .15424479+03    |
| .13700690+01         | .10084216+01        | .27555227-03         | .35645942+02    | .17519243+03    |
| .13770501+01         | .10085342+01        | .25305152-03         | .39876703+02    | .20323750+03    |
| .13840313+01         | .10086599+01        | .22885203-03         | .45917726+02    | .24299294+03    |
| .13910124+01         | .10088043+01        | .20214915-03         | .55332191+02    | .30444740+03    |
| .13979935+01         | .10089786+01        | .17121434-03         | .72383094+02    | .41469922+03    |
| .14049741+01         | .10092138+01        | .13080239-03         | .11555359+03    | .69045350+03    |
| .14099102+01         | .10095206+01        | .79914927-04         | .29131221+03    | .17950238+04    |

$$.19455911-07 = \Delta S/R$$

$$.10169789+01 = P_s/P_{\infty}$$

$$.10101528+01 = \rho_s/\rho_{\infty}$$

$$.10067575+01 = T_s/T_{\infty}$$

TABLE 19. CONICAL FLOWFIELD  $\theta_s = 2.5 \text{ DEG}$ ;  $M_\infty = 1.5$

| $\underline{u_s}$    | $\underline{M_\infty}$ | $\underline{\theta_s}$ | $\underline{\theta_w}$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .65062521+00         | .14999987+01           | .43633230-01           | .72980881+00           |                 |
| $\underline{\theta}$ | $\underline{M_1^*}$    | $\underline{\psi_1}$   | $\underline{x}$        | $\underline{r}$ |
| .43633230-01         | .13012260+01           | .43633230-01           | .11451803+02           | .50000000+00    |
| .64577170-01         | .13015249+01           | .29470949-01           | .11714925+02           | .75757005+00    |
| .85521109-01         | .13019808+01           | .22222143-01           | .11997593+02           | .10285562+01    |
| .10646505+00         | .13024146+01           | .17805844-01           | .12299516+02           | .13144386+01    |
| .12740899+00         | .13028044+01           | .14825804-01           | .12621550+02           | .16168572+01    |
| .14835293+00         | .13031531+01           | .12674132-01           | .12965207+02           | .19376623+01    |
| .16929687+00         | .13034671+01           | .11043577-01           | .13332487+02           | .22789627+01    |
| .18805915+00         | .13037239+01           | .98827146-02           | .13683576+02           | .26040932+01    |
| .20682143+00         | .13039614+01           | .89251362-02           | .14057692+02           | .29496088+01    |
| .22558371+00         | .13041826+01           | .81200041-02           | .14457283+02           | .33177980+01    |
| .24434599+00         | .13043902+01           | .74321218-02           | .14885201+02           | .37112958+01    |
| .26310826+00         | .13045860+01           | .68363361-02           | .15344776+02           | .41331542+01    |
| .28187054+00         | .13047718+01           | .63140541-02           | .15839903+02           | .45869289+01    |
| .29845116+00         | .13049287+01           | .59025176-02           | .16310694+02           | .50178223+01    |
| .31503178+00         | .13050799+01           | .55300295-02           | .16816520+02           | .54802449+01    |
| .33161240+00         | .13052259+01           | .51905997-02           | .17361700+02           | .59781096+01    |
| .34819302+00         | .13053675+01           | .48794225-02           | .17951299+02           | .65160002+01    |
| .36477364+00         | .13055053+01           | .45924373-02           | .18591303+02           | .70993243+01    |
| .38135426+00         | .13056397+01           | .43263324-02           | .19288817+02           | .77345045+01    |
| .39575322+00         | .13057542+01           | .41100234-02           | .19947776+02           | .83341060+01    |
| .41015217+00         | .13058669+01           | .39058328-02           | .20663155+02           | .89845903+01    |
| .42455113+00         | .13059780+01           | .37123822-02           | .21442841+02           | .96930745+01    |
| .43895009+00         | .13060879+01           | .35284460-02           | .22296272+02           | .10468067+02    |
| .45334905+00         | .13061968+01           | .33529103-02           | .23234829+02           | .11319830+02    |
| .46774801+00         | .13063051+01           | .31849109-02           | .24272367+02           | .12260848+02    |
| .47996531+00         | .13063966+01           | .30475445-02           | .25242908+02           | .13140618+02    |
| .49218260+00         | .13064880+01           | .29144585-02           | .26309613+02           | .14107083+02    |
| .50439987+00         | .13065795+01           | .27851388-02           | .27487902+02           | .15174127+02    |
| .51661706+00         | .13066713+01           | .26591122+02           | .28796689+02           | .16358781+02    |
| .52883425+00         | .13067636+01           | .25360584-02           | .30259434+02           | .17682165+02    |
| .54105145+00         | .13068565+01           | .24155229-02           | .31905581+02           | .19170780+02    |
| .55108700+00         | .13069336+01           | .23101364-02           | .33421029+02           | .20540624+02    |
| .56112255+00         | .13070115+01           | .22219494-02           | .35111463+02           | .22068061+02    |
| .57115810+00         | .13070904+01           | .21267459-02           | .37009548+02           | .23782471+02    |
| .58119366+00         | .13071704+01           | .20322427-02           | .39156641+02           | .25721050+02    |
| .59122921+00         | .13072518+01           | .19381866-02           | .41605884+02           | .27931585+02    |
| .60126476+00         | .13073348+01           | .18443018-02           | .44426744+02           | .30476530+02    |
| .60911837+00         | .13074012+01           | .17707571-02           | .46952426+02           | .32754379+02    |
| .61697259+00         | .13074689+01           | .16969442-02           | .49819835+02           | .35339622+02    |
| .62482649+00         | .13075382+01           | .16226768-02           | .53104125+02           | .38299791+02    |

TABLE 19. (Concluded)

$$M_{\infty} = .14799987+01$$

$$\Theta_s = .43633230-01$$

| $\Theta$      | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|---------------|--------------|--------------|--------------|--------------|
| .63268040+00  | .13076693+01 | .15477538-02 | .56904261+02 | .41723803+02 |
| .64053431+00  | .13076825+01 | .14718696-02 | .61353366+02 | .45731244+02 |
| .64838822+00  | .13077582+01 | .13947487-02 | .66634818+02 | .50486820+02 |
| .65406049+00  | .13078146+01 | .13380721-02 | .71109448+02 | .54514732+02 |
| .65973276+00  | .13078727+01 | .12803674-02 | .76285741+02 | .59173078+02 |
| .66540503+00  | .13079327+01 | .12214482-02 | .82344237+02 | .64623935+02 |
| .67107730+00  | .13079950+01 | .11610612-02 | .89533521+02 | .71090434+02 |
| .67674956+00  | .13080599+01 | .10988936-02 | .98205715+02 | .78888596+02 |
| .68242183+00  | .13081278+01 | .10345578-02 | .10887679+03 | .88481421+02 |
| .688591246+00 | .13081714+01 | .99366158-03 | .11676226+03 | .95568423+02 |
| .68940309+00  | .13082166+01 | .95159560-03 | .12595664+03 | .10383022+03 |
| .69289371+00  | .13082635+01 | .90818852-03 | .13681847+03 | .11358842+03 |
| .69638434+00  | .13083125+01 | .86317211-03 | .14985106+03 | .12529442+03 |
| .69987497+00  | .13083639+01 | .81631541-03 | .16578461+03 | .13960302+03 |
| .70336559+00  | .13084182+01 | .76718628-03 | .18572032+03 | .15750161+03 |
| .70685622+00  | .13084759+01 | .71527064-03 | .21140236+03 | .18055390+03 |
| .71034685+00  | .13085379+01 | .65989792-03 | .24577108+03 | .21139555+03 |
| .71383747+00  | .13086056+01 | .59996545-03 | .29420991+03 | .25485149+03 |
| .71732810+00  | .13086807+01 | .53381920-03 | .36777715+03 | .32083101+03 |
| .72081863+00  | .13087670+01 | .45844167-03 | .49349556+03 | .43354439+03 |
| .72430848+00  | .13088721+01 | .36738813-03 | .76037630+03 | .67271984+03 |
| .72779834+00  | .13090203+01 | .23983419-03 | .17651840+04 | .15727090+04 |
| .72980881+00  | .13092224+01 | .67010522-04 | .20471296+05 | .18313075+05 |

$$.15617843-07 = \Delta S/R$$

$$.10232159+01 = P_s/P_{\infty}$$

$$.10138653+01 = \rho_s/\rho_{\infty}$$

$$.10692228+01 = T_s/T_{\infty}$$



TABLE 20. CONICAL FLOWFIELD  $\theta_s = 2.5$  DEG;  $M_\infty = 2.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .75187923+00 | .19999964+01 | .43633230-01 | .52372407+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .43633230-01 | .15037303+01 | .43633230-01 | .11451883+02 | .50000000+00 |
| .58032189-01 | .15039250+01 | .32798504-01 | .11736595+02 | .68186590+00 |
| .72431147-01 | .15042720+01 | .26249108-01 | .12042896+02 | .87380935+00 |
| .86830106-01 | .15046377+01 | .21849978-01 | .12371099+02 | .10768915+01 |
| .10122906+00 | .15049883+01 | .18683457-01 | .12722380+02 | .12922918+01 |
| .11562802+00 | .15053160+01 | .16289349-01 | .13098487+02 | .15213381+01 |
| .13002698+00 | .15056206+01 | .14411248-01 | .13501657+02 | .17655409+01 |
| .14442594+00 | .15059038+01 | .12894908-01 | .13934609+02 | .20266297+01 |
| .15707957+00 | .15061373+01 | .11782201-01 | .14342214+02 | .22715826+01 |
| .16977332+00 | .15063578+01 | .10826979-01 | .14777873+02 | .25326639+01 |
| .18238683+00 | .15065670+01 | .99963732-02 | .15244556+02 | .28116521+01 |
| .19504046+00 | .15067662+01 | .92660338-02 | .15745713+02 | .31105946+01 |
| .20769409+00 | .15069568+01 | .86174607-02 | .16285347+02 | .34318594+01 |
| .22034772+00 | .15071396+01 | .80363750-02 | .16868143+02 | .37782035+01 |
| .23300135+00 | .15073157+01 | .75116195-02 | .17499597+02 | .41528555+01 |
| .24390965+00 | .15074627+01 | .70976056-02 | .18087950+02 | .45014482+01 |
| .25481796+00 | .15076058+01 | .67140833-02 | .18722148+02 | .48767518+01 |
| .26572626+00 | .15077455+01 | .63571781-02 | .19407893+02 | .52820997+01 |
| .27663456+00 | .15078822+01 | .60235560-02 | .20151876+02 | .57214019+01 |
| .28754286+00 | .15080163+01 | .57103224-02 | .20962009+02 | .61992791+01 |
| .29845116+00 | .15081480+01 | .54150783-02 | .21847721+02 | .67212332+01 |
| .30935946+00 | .15082779+01 | .51356815-02 | .22820326+02 | .72938640+01 |
| .31852244+00 | .15083858+01 | .49118586-02 | .23714409+02 | .78198355+01 |
| .32768541+00 | .15084928+01 | .46968609-02 | .24689178+02 | .83928580+01 |
| .33684839+00 | .15085991+01 | .44898167-02 | .25756266+02 | .90197113+01 |
| .34601136+00 | .15087050+01 | .42898990-02 | .26929667+02 | .97085471+01 |
| .35517433+00 | .15088106+01 | .40962994-02 | .28226369+02 | .10469257+02 |
| .36433731+00 | .15089161+01 | .39082877-02 | .29667188+02 | .11313962+02 |
| .37350028+00 | .15090219+01 | .37251934-02 | .31277926+02 | .12257679+02 |
| .38091793+00 | .15091078+01 | .35801306-02 | .32728262+02 | .13106932+02 |
| .38833557+00 | .15091942+01 | .34374818-02 | .34332274+02 | .14045697+02 |
| .39575322+00 | .15092813+01 | .32969043-02 | .36116089+02 | .15089166+02 |
| .40317086+00 | .15093691+01 | .31580590-02 | .38112092+02 | .16256176+02 |
| .41058851+00 | .15094579+01 | .30205660-02 | .40361005+02 | .17570399+02 |
| .41800615+00 | .15095479+01 | .28840415-02 | .42914705+02 | .19061990+02 |
| .42542380+00 | .15096394+01 | .27480833-02 | .45840361+02 | .20769986+02 |
| .43109611+00 | .15097105+01 | .26442334-02 | .48382661+02 | .22253525+02 |
| .43676843+00 | .15097829+01 | .25402196-02 | .51244782+02 | .23923048+02 |
| .44244075+00 | .15098567+01 | .24357977-02 | .54491736+02 | .25816314+02 |
| .44811307+00 | .15099320+01 | .23307167-02 | .58207557+02 | .27982116+02 |

TABLE 20. (concluded)

| $M_{\infty} = .19999964+01$ |                     | $\Theta_s = .43633230-01$ |                 |                 |
|-----------------------------|---------------------|---------------------------|-----------------|-----------------|
| $\underline{\Theta}$        | $\underline{M_1^*}$ | $\underline{\psi_1}$      | $\underline{x}$ | $\underline{r}$ |
| .45378538+00                | .15100093+01        | .22246242-02              | .62502742+02    | .30484607+02    |
| .45945770+00                | .15100887+01        | .21171793-02              | .67525723+02    | .33409940+02    |
| .46513002+00                | .15101705+01        | .20079315-02              | .73480594+02    | .36876558+02    |
| .46905700+00                | .15102290+01        | .19309558-02              | .78296247+02    | .39678983+02    |
| .47298399+00                | .15102890+01        | .18526204-02              | .83824568+02    | .42895173+02    |
| .47691098+00                | .15103509+01        | .17727055-02              | .90238127+02    | .46625217+02    |
| .48083797+00                | .15104148+01        | .16908608-02              | .97770435+02    | .51004529+02    |
| .48476496+00                | .15104813+01        | .16067289-02              | .10674565+03    | .56221051+02    |
| .48869195+00                | .15105505+01        | .15198328-02              | .11762750+03    | .62543613+02    |
| .49261894+00                | .15106232+01        | .14295541-02              | .13110409+03    | .70371023+02    |
| .49480060+00                | .15106653+01        | .13776310-02              | .14008250+03    | .75584372+02    |
| .49698226+00                | .15107088+01        | .13242587-02              | .15044006+03    | .81597267+02    |
| .49916392+00                | .15107540+01        | .12691990-02              | .16252522+03    | .88611572+02    |
| .50134557+00                | .15108010+01        | .12121797-02              | .17681579+03    | .96904055+02    |
| .50352721+00                | .15108501+01        | .11529177-02              | .19398538+03    | .10686485+03    |
| .50570885+00                | .15109017+01        | .10909438-02              | .21501618+03    | .11906271+03    |
| .50789049+00                | .15109563+01        | .10257214-02              | .24140007+03    | .13436145+03    |
| .51007213+00                | .15110145+01        | .95649809-03              | .27552173+03    | .15414157+03    |
| .51225329+00                | .15110779+01        | .88230520-03              | .32144116+03    | .18075304+03    |
| .51443445+00                | .15111473+01        | .80142915-03              | .38675468+03    | .21859186+03    |
| .51661561+00                | .15112250+01        | .71126223-03              | .48750501+03    | .27694019+03    |
| .51879676+00                | .15113154+01        | .60686469-03              | .664887615+03   | .37962116+03    |
| .52097792+00                | .15114284+01        | .47675520-03              | .10695594+04    | .41377851+03    |
| .52315908+00                | .15116074+01        | .27158856-03              | .32676723+04    | .18846762+04    |
| .52372407+00                | .15117226+01        | .13975799-03              | .11907216+05    | .68766237+04    |

$$.19648812-07 = \Delta S/R$$

$$.10360684+01 = P_s/P_{\infty}$$

$$.10214871+01 = \rho_s/\rho_{\infty}$$

$$.10142746+01 = T_s/T_{\infty}$$

TABLE 21. CONICAL FLOWFIELD  $\theta_s = 2.5$  DEG;  $M_\infty = 2.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .81800000+00 | .25000089+01 | .43633230+01 | .41172479+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .43633230+01 | .16359693+01 | .43633230+01 | .11451883+02 | .50000000+00 |
| .54541532+01 | .16361040+01 | .34899912+01 | .11738411+02 | .64086650+00 |
| .65449834+01 | .16363690+01 | .29057113+01 | .12046542+02 | .78957192+00 |
| .76358136+01 | .16366693+01 | .24861271+01 | .12376944+02 | .94692141+00 |
| .87266438+01 | .16369721+01 | .21693831+01 | .12730915+02 | .11138103+01 |
| .98174740+01 | .16372656+01 | .19211909+01 | .13110245+02 | .12912459+01 |
| .10821038+00 | .16375239+01 | .17355835+01 | .13483541+02 | .14647808+01 |
| .11824602+00 | .16377704+01 | .15801996+01 | .13882271+02 | .16492169+01 |
| .12828165+00 | .16380055+01 | .14479456+01 | .14308872+02 | .18457012+01 |
| .13831729+00 | .16382297+01 | .13337793+01 | .14766178+02 | .20555431+01 |
| .14835293+00 | .16384442+01 | .12340194+01 | .15257483+02 | .22802451+01 |
| .15751590+00 | .16386323+01 | .11531686+01 | .15738999+02 | .24998517+01 |
| .16667888+00 | .16388137+01 | .10804102+01 | .16255430+02 | .27348099+01 |
| .17584185+00 | .16389891+01 | .10144632+01 | .16810689+02 | .29868712+01 |
| .18500482+00 | .16391591+01 | .95429681+02 | .17409316+02 | .32580634+01 |
| .19416780+00 | .16393242+01 | .89906976+02 | .18056613+02 | .35507478+01 |
| .20245811+00 | .16394699+01 | .85277930+02 | .18689369+02 | .38363748+01 |
| .21074842+00 | .16396125+01 | .80953613+02 | .19372442+02 | .41442491+01 |
| .21903872+00 | .16397523+01 | .76897256+02 | .20112132+02 | .44771676+01 |
| .22732903+00 | .16398897+01 | .73077716+02 | .20915863+02 | .48384188+01 |
| .23561934+00 | .16400249+01 | .69466606+02 | .21792421+02 | .52318749+01 |
| .24390369+00 | .16401444+01 | .66392943+02 | .22646978+02 | .56150456+01 |
| .25045463+00 | .16402627+01 | .63452385+02 | .23577146+02 | .60316529+01 |
| .25787228+00 | .16403800+01 | .60630143+02 | .24593550+02 | .64864143+01 |
| .26528993+00 | .16404965+01 | .57914443+02 | .25708915+02 | .69849543+01 |
| .27270757+00 | .16406127+01 | .55293664+02 | .26938616+02 | .75340649+01 |
| .27925255+00 | .16407148+01 | .53051189+02 | .28133462+02 | .80671365+01 |
| .28579753+00 | .16408170+01 | .50867014+02 | .29447516+02 | .86529109+01 |
| .29234251+00 | .16409192+01 | .48734657+02 | .30899772+02 | .92977712+01 |
| .29888749+00 | .16410218+01 | .46647862+02 | .32513510+02 | .10017988+02 |
| .30543248+00 | .16411250+01 | .44599958+02 | .34317582+02 | .10820286+02 |
| .31110479+00 | .16412151+01 | .42851903+02 | .36062810+02 | .11595856+02 |
| .31677711+00 | .16413059+01 | .41124485+02 | .38007454+02 | .12459466+02 |
| .32244943+00 | .16413977+01 | .39413609+02 | .40198173+02 | .13427272+02 |
| .32812174+00 | .16414907+01 | .37713908+02 | .42651235+02 | .14519657+02 |
| .33379406+00 | .16415851+01 | .36021434+02 | .45455962+02 | .15762745+02 |
| .33859371+00 | .16416663+01 | .34590922+02 | .48152655+02 | .16957217+02 |
| .34339337+00 | .16417490+01 | .33157952+02 | .51209433+02 | .18310417+02 |
| .34819302+00 | .16418334+01 | .31718761+02 | .54704490+02 | .19856750+02 |
| .35299267+00 | .16419197+01 | .30268990+02 | .58740356+02 | .21641409+02 |

TABLE 21. (Concluded)

$$M_{\infty} = .25000089+01$$

$$\Theta_s = .43633230-01$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .35779233+00 | .16420083+01 | .28803013-02 | .63455495+02 | .23725025+02 |
| .36171931+00 | .16420828+01 | .27587861-02 | .67948230+02 | .25709370+02 |
| .36564630+00 | .16421593+01 | .26353672-02 | .73161764+02 | .28010926+02 |
| .36957329+00 | .16422383+01 | .25096051-02 | .79287166+02 | .30713655+02 |
| .37350028+00 | .16423202+01 | .23808815-02 | .86590270+02 | .33934338+02 |
| .37742727+00 | .16424054+01 | .22485182-02 | .95452412+02 | .37840449+02 |
| .38048159+00 | .16424744+01 | .21423921-02 | .10377683+03 | .41507748+02 |
| .38353592+00 | .16425462+01 | .20329170-02 | .11377191+03 | .45909076+02 |
| .38659024+00 | .16426215+01 | .19193813-02 | .12600621+03 | .51293924+02 |
| .38964457+00 | .16427007+01 | .18007904-02 | .14134251+03 | .58040813+02 |
| .39269889+00 | .16427850+01 | .16758889-02 | .16115939+03 | .66754367+02 |
| .39488053+00 | .16428493+01 | .15820712-02 | .17929764+03 | .74726165+02 |
| .39706215+00 | .16429178+01 | .14832951-02 | .20228837+03 | .84826493+02 |
| .39924378+00 | .16429912+01 | .13781637-02 | .23243624+03 | .98065338+02 |
| .40142540+00 | .16430708+01 | .12647100-02 | .27381384+03 | .11622697+03 |
| .40360702+00 | .16431587+01 | .11399463-02 | .33439708+03 | .14280478+03 |
| .40491600+00 | .16432170+01 | .10576695-02 | .38666455+03 | .16572446+03 |
| .40622497+00 | .16432809+01 | .96772984-03 | .45982088+03 | .19779213+03 |
| .40753394+00 | .16433526+01 | .86705387-03 | .57027967+03 | .24619112+03 |
| .40884292+00 | .16434362+01 | .75004250-03 | .75884457+03 | .32877414+03 |
| .41015189+00 | .16435412+01 | .60342252+03 | .11675296+04 | .50765564+03 |
| .41146087+00 | .16437099+01 | .36831945+03 | .31044170+04 | .13546718+04 |
| .41172479+00 | .16437849+01 | .26393682+03 | .59062957+04 | .25791810+04 |

$$-.13620593-07 = \Delta S/R$$

$$.10513699+01 = P_s/P_{\infty}$$

$$.10305120+01 = \rho_s/\rho_{\infty}$$

$$.10202403+01 = T_s/T_{\infty}$$

TABLE 22. CONICAL FLOWFIELD  $\theta_s = 2.5$  DEG;  $M_\infty = 3.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .86213154+00 | .29999968+01 | .43633230-01 | .34017425+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .43633230-01 | .17242307+01 | .43633230-01 | .11451883+02 | .50000000+00 |
| .51487207-01 | .17243118+01 | .36973153-01 | .11705704+02 | .60322711+00 |
| .59341185-01 | .17244874+01 | .32061410-01 | .11976526+02 | .71153664+00 |
| .67195162-01 | .17247024+01 | .28280003-01 | .12264931+02 | .82538661+00 |
| .75049140-01 | .17249320+01 | .25272369-01 | .12571832+02 | .94528054+00 |
| .82903117-01 | .17251645+01 | .22818012-01 | .12898426+02 | .10717762+01 |
| .90757094-01 | .17253940+01 | .20773085-01 | .13246174+02 | .12054959+01 |
| .98611072-01 | .17256178+01 | .19039679-01 | .13616808+02 | .13471374+01 |
| .10559238+00 | .17258113+01 | .17704158-01 | .13967098+02 | .14803250+01 |
| .11257370+00 | .17259990+01 | .16524334-01 | .14338691+02 | .16210128+01 |
| .11955501+00 | .17261813+01 | .15472865-01 | .14733438+02 | .17698969+01 |
| .12653632+00 | .17263581+01 | .14528403-01 | .15153446+02 | .19277611+01 |
| .13351764+00 | .17265299+01 | .13674054-01 | .15601118+02 | .20954912+01 |
| .14049895+00 | .17266969+01 | .12896242-01 | .16079189+02 | .22740924+01 |
| .14748026+00 | .17268596+01 | .12183944-01 | .16590799+02 | .24647109+01 |
| .15358891+00 | .17269986+01 | .11607260-01 | .17068789+02 | .26423870+01 |
| .15969756+00 | .17271348+01 | .11068681-01 | .17577967+02 | .28312683+01 |
| .16580621+00 | .17272684+01 | .10563847-01 | .18121471+02 | .30324929+01 |
| .17191486+00 | .17273996+01 | .10089003-01 | .18702887+02 | .32473589+01 |
| .17802351+00 | .17275287+01 | .96408874-02 | .19326328+02 | .34773536+01 |
| .18413216+00 | .17276558+01 | .92166476-02 | .19996534+02 | .37241896+01 |
| .19024081+00 | .17277813+01 | .88137873-02 | .20719002+02 | .39898490+01 |
| .19547679+00 | .17278876+01 | .84837861-02 | .21384675+02 | .42342778+01 |
| .20071278+00 | .17279929+01 | .81666261-02 | .22098094+02 | .44959059+01 |
| .20594876+00 | .17280974+01 | .78611001-02 | .22864624+02 | .47766667+01 |
| .21118475+00 | .17282013+01 | .75662248-02 | .23690484+02 | .50787973+01 |
| .21642073+00 | .17283045+01 | .72809942-02 | .24582905+02 | .54048996+01 |
| .22165672+00 | .17284074+01 | .70045330-02 | .25550352+02 | .57580179+01 |
| .22689270+00 | .17285100+01 | .67359842-02 | .26602812+02 | .61417402+01 |
| .23125602+00 | .17285954+01 | .65176599-02 | .27553278+02 | .64879326+01 |
| .23561934+00 | .17286809+01 | .63038953-02 | .28579030+02 | .68612147+01 |
| .23998266+00 | .17287664+01 | .60942248-02 | .29689483+02 | .72649669+01 |
| .24434599+00 | .17288522+01 | .58862535-02 | .30895707+02 | .77031612+01 |
| .24870931+00 | .17289383+01 | .56855679-02 | .32210808+02 | .81804991+01 |
| .25307263+00 | .17290249+01 | .54857582-02 | .33650401+02 | .87025809+01 |
| .25743595+00 | .17291120+01 | .52884705-02 | .35233276+02 | .92761428+01 |
| .26092660+00 | .17291822+01 | .51321052-02 | .36617890+02 | .97774879+01 |
| .26441726+00 | .17292530+01 | .49769096-02 | .38122666+02 | .10321978+02 |
| .26790792+00 | .17293244+01 | .48225746-02 | .39764168+02 | .10915547+02 |
| .27139857+00 | .17293966+01 | .46689361-02 | .41562162+02 | .11565271+02 |

TABLE 22. (Concluded)

$$M_{\infty} = .29999968+01$$

$$\Theta_s = .43633230-01$$

| $\underline{e}$ | $\underline{M}_1^*$ | $\underline{\psi}_1$ | $\underline{x}$ | $\underline{r}$ |
|-----------------|---------------------|----------------------|-----------------|-----------------|
| .27488923+00    | .17294696+01        | .45157261-02         | .43540460+02    | .12279674+02    |
| .27837989+00    | .17295435+01        | .43626390-02         | .45728004+02    | .13069112+02    |
| .28187054+00    | .17296185+01        | .42094812-02         | .48160323+02    | .13946297+02    |
| .28448854+00    | .17296757+01        | .40943176-02         | .50171362+02    | .14671126+02    |
| .28710653+00    | .17297336+01        | .39787628-02         | .52367331+02    | .15462206+02    |
| .28972452+00    | .17297923+01        | .38626716-02         | .54775373+02    | .16329240+02    |
| .29234251+00    | .17298521+01        | .37458837-02         | .57428240+02    | .17283930+02    |
| .29496051+00    | .17299129+01        | .36281906-02         | .60365848+02    | .18340538+02    |
| .29757850+00    | .17299749+01        | .35093576-02         | .63637396+02    | .19516636+02    |
| .30019649+00    | .17300382+01        | .33891574-02         | .67304210+02    | .20834125+02    |
| .30194182+00    | .17300812+01        | .33081733-02         | .70005806+02    | .21804369+02    |
| .30368715+00    | .17301250+01        | .32263137-02         | .72945144+02    | .22859611+02    |
| .30543248+00    | .17301695+01        | .31435341-02         | .76155586+02    | .24011752+02    |
| .30717780+00    | .17302149+01        | .30597150-02         | .79677140+02    | .25275065+02    |
| .30892313+00    | .17302612+01        | .29747523-02         | .83558146+02    | .26666792+02    |
| .31066846+00    | .17303086+01        | .28884374-02         | .87857612+02    | .28207979+02    |
| .31241379+00    | .17303571+01        | .28006360-02         | .92648433+02    | .29924613+02    |
| .31415912+00    | .17304068+01        | .27110949-02         | .98021605+02    | .31849134+02    |
| .31590445+00    | .17304579+01        | .26196614-02         | .10409245+03    | .34022639+02    |
| .31764977+00    | .17305106+01        | .25260523-02         | .11100931+03    | .36497985+02    |
| .31939508+00    | .17305655+01        | .24301000-02         | .11896634+03    | .39344332+02    |
| .32114038+00    | .17306225+01        | .23313090-02         | .12822319+03    | .42654150+02    |
| .32288568+00    | .17306819+01        | .22291020-02         | .13913519+03    | .46553946+02    |
| .32463098+00    | .17307439+01        | .21228343-02         | .15220265+03    | .51221807+02    |
| .32637627+00    | .17308091+01        | .20117909-02         | .16815398+03    | .56916925+02    |
| .32812157+00    | .17308781+01        | .18948391-02         | .18809526+03    | .64032780+02    |
| .32986687+00    | .17309519+01        | .17705634-02         | .21379603+03    | .73198656+02    |
| .33161217+00    | .17310318+01        | .16368814-02         | .24828605+03    | .85491632+02    |
| .33335747+00    | .17311195+01        | .14904961-02         | .29725346+03    | .10293310+03    |
| .33510277+00    | .17312187+01        | .13260096-02         | .37289718+03    | .12985635+03    |
| .33684807+00    | .17313360+01        | .11326633-02         | .50757225+03    | .17774900+03    |
| .33859336+00    | .17314886+01        | .88219717-03         | .83120434+03    | .29271277+03    |
| .34017425+00    | .17317536+01        | .44906139-03         | .31456184+04    | .11133380+04    |

$$.36641723-07 = \Delta S/R$$

$$.10687504+01 = P_s/P_{\infty}$$

$$.10406997+01 = \rho_s/\rho_{\infty}$$

$$.10269537+01 = T_s/T_{\infty}$$

TABLE 23. CONICAL FLOWFIELD  $\theta_s = 2.5$  DEG;  $M_\infty = 4.0$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .91402105+00 | .39999850+01 | .43633230-01 | .25342878+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .43633230-01 | .18280078+01 | .43633230-01 | .11451883+02 | .50000000+00 |
| .50178211-01 | .18280701+01 | .37937567-01 | .11742100+02 | .58969255+00 |
| .56723192-01 | .18282115+01 | .33539382-01 | .12054508+02 | .68450447+00 |
| .63268173-01 | .18283920+01 | .30028994-01 | .12390453+02 | .78496893+00 |
| .69813155-01 | .18285912+01 | .27153695-01 | .12751696+02 | .89168525+00 |
| .75921804-01 | .18287844+01 | .24896903-01 | .13113592+02 | .99752486+00 |
| .82030453-01 | .18289797+01 | .22957298-01 | .13501522+02 | .11100269+01 |
| .88139102-01 | .18291744+01 | .21268508-01 | .13917963+02 | .12299032+01 |
| .94247751-01 | .18293669+01 | .19781427-01 | .14365803+02 | .13579677+01 |
| .99920068-01 | .18295430+01 | .18548556-01 | .14812709+02 | .14850323+01 |
| .10559238+00 | .18297182+01 | .17434361-01 | .15292729+02 | .16208241+01 |
| .11126470+00 | .18298865+01 | .16420402-01 | .15809494+02 | .17663336+01 |
| .11693702+00 | .18300539+01 | .15491769-01 | .16367236+02 | .19227076+01 |
| .12217300+00 | .18302059+01 | .14699715-01 | .16922702+02 | .20778458+01 |
| .12740899+00 | .18303557+01 | .13961958-01 | .17521821+02 | .22445962+01 |
| .13264497+00 | .18305031+01 | .13271727-01 | .18169886+02 | .24243794+01 |
| .13788096+00 | .18306495+01 | .12623228-01 | .18873105+02 | .26188587+01 |
| .14268061+00 | .18307819+01 | .12061149-01 | .19572416+02 | .28117102+01 |
| .14748026+00 | .18309132+01 | .11526568-01 | .20330891+02 | .30203348+01 |
| .15227992+00 | .18310435+01 | .11016490-01 | .21156396+02 | .32468301+01 |
| .15707957+00 | .18311732+01 | .10528248-01 | .22058282+02 | .34936872+01 |
| .16144289+00 | .18312906+01 | .10101303-01 | .22953849+02 | .37382701+01 |
| .16580621+00 | .18314077+01 | .96887406-02 | .23931857+02 | .40048177+01 |
| .17016953+00 | .18315248+01 | .92890188-02 | .25004372+02 | .42965350+01 |
| .17453285+00 | .18316420+01 | .89006964-02 | .26185970+02 | .46172910+01 |
| .17845984+00 | .18317478+01 | .85598137-02 | .27357296+02 | .49346767+01 |
| .18238683+00 | .18318541+01 | .82260910-02 | .28647120+02 | .52835736+01 |
| .18631382+00 | .18319611+01 | .78985952-02 | .30074686+02 | .56690784+01 |
| .19024081+00 | .18320689+01 | .75763389-02 | .31663700+02 | .60974647+01 |
| .19373146+00 | .18321657+01 | .72935745-02 | .33235412+02 | .65205255+01 |
| .19722212+00 | .18322635+01 | .70134997-02 | .34983757+02 | .69904413+01 |
| .20071278+00 | .18323627+01 | .67354627-02 | .36940891+02 | .75157058+01 |
| .20420343+00 | .18324634+01 | .64586811-02 | .39147418+02 | .81070367+01 |
| .20725776+00 | .18325529+01 | .62169135-02 | .41323219+02 | .86893345+01 |
| .21031208+00 | .18326441+01 | .59748068-02 | .43774058+02 | .93443923+01 |
| .21336641+00 | .18327373+01 | .57318024-02 | .46556890+02 | .10087217+02 |
| .21642073+00 | .18328326+01 | .54870583-02 | .49745819+02 | .10937322+02 |
| .21903872+00 | .18329163+01 | .52752532-02 | .52876076+02 | .11770759+02 |
| .22165672+00 | .18330023+01 | .50608814-02 | .56458232+02 | .12723406+02 |
| .22427471+00 | .18330907+01 | .48431605-02 | .60600637+02 | .13823745+02 |



TABLE 23. (Concluded)

$$M_{\infty} = .39999850+01$$

$$\Theta_s = .43633230-01$$

| $\underline{\Theta}$ | $\underline{M_1^*}$ | $\underline{\psi_1}$ | $\underline{x}$ | $\underline{r}$ |
|----------------------|---------------------|----------------------|-----------------|-----------------|
| .22689269+00         | .18331823+01        | .46212114-02         | .65450035+02    | .15110324+02    |
| .22907432+00         | .18332619+01        | .44323206-02         | .70176065+02    | .16362752+02    |
| .23125594+00         | .18333444+01        | .42388402-02         | .75696417+02    | .17824125+02    |
| .23343756+00         | .18334301+01        | .40397570-02         | .82237059+02    | .19553696+02    |
| .23561919+00         | .18335197+01        | .38338304-02         | .90121019+02    | .21636117+02    |
| .23736449+00         | .18335947+01        | .36629736-02         | .97709830+02    | .23638465+02    |
| .23910978+00         | .18336732+01        | .34855343-02         | .10682030+03    | .26039947+02    |
| .24085508+00         | .18337560+01        | .32999851-02         | .11798317+03    | .28979402+02    |
| .24260038+00         | .18338440+01        | .31043813-02         | .13201741+03    | .32670951+02    |
| .24390936+00         | .18339142+01        | .29493831-02         | .14520237+03    | .36135666+02    |
| .24521833+00         | .18339889+01        | .27854778-02         | .16163961+03    | .40451066+02    |
| .24652730+00         | .18340691+01        | .26103035-02         | .18278464+03    | .45997035+02    |
| .24783628+00         | .18341567+01        | .24203360-02         | .21116226+03    | .53432158+02    |
| .24870893+00         | .18342204+01        | .22828169-02         | .23632068+03    | .60017682+02    |
| .24958158+00         | .18342897+01        | .21336824-02         | .26934417+03    | .68654822+02    |
| .25045422+00         | .18343667+01        | .19688532-02         | .31502049+03    | .80590372+02    |
| .25132687+00         | .18344547+01        | .17810427-02         | .38341944+03    | .98445159+02    |
| .25219952+00         | .18345609+01        | .15552416-02         | .50090873+03    | .12907725+03    |
| .25307217+00         | .18347068+01        | .12460798-02         | .77680798+03    | .20089573+03    |
| .25342878+00         | .18347998+01        | .10497048-02         | .10896747+04    | .28222299+03    |

$$.18160790-07 = \Delta S/R$$

$$.11090864+01 = P_s/P_{\infty}$$

$$.10640908+01 = \rho_s/\rho_{\infty}$$

$$.10422855+01 = T_s/T_{\infty}$$



TABLE 24. CONICAL FLOWFIELD  $\theta_s = 2.5$  DEG;  $M_\infty = 5.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .94151965+00 | .49999942+01 | .43633230-01 | .20275525+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .43633230-01 | .18830040+01 | .43633230-01 | .11451883+02 | .50000000+00 |
| .47996551-01 | .18830347+01 | .39664337-01 | .11693811+02 | .56169395+00 |
| .52359872-01 | .18831104+01 | .36347271-01 | .11951263+02 | .62633909+00 |
| .56723192-01 | .18832143+01 | .33526385-01 | .12225143+02 | .69419383+00 |
| .61086513-01 | .18833361+01 | .31092407-01 | .12516539+02 | .76554414+00 |
| .65449834-01 | .18834692+01 | .28966191-01 | .12826729+02 | .84070804+00 |
| .69813155-01 | .18836092+01 | .27088905-01 | .13157200+02 | .92004082+00 |
| .74176475-01 | .18837534+01 | .25415833-01 | .13509666+02 | .10039414+01 |
| .78539796-01 | .18838999+01 | .23912350-01 | .13886100+02 | .10928594+01 |
| .82903117-01 | .18840475+01 | .22551184-01 | .14288766+02 | .11873046+01 |
| .87266438-01 | .18841953+01 | .21310543-01 | .14720275+02 | .12878567+01 |
| .91629758-01 | .18843428+01 | .20172777-01 | .15183634+02 | .13951795+01 |
| .95993079-01 | .18844898+01 | .19123419-01 | .15682326+02 | .15100358+01 |
| .99483736-01 | .18846068+01 | .18339463-01 | .16109420+02 | .16079333+01 |
| .10297439+00 | .18847232+01 | .17599155-01 | .16564088+02 | .17117314+01 |
| .10646505+00 | .18848392+01 | .16897936-01 | .17049032+02 | .18220152+01 |
| .10995571+00 | .18849546+01 | .16231796-01 | .17567342+02 | .19394519+01 |
| .11344636+00 | .18850696+01 | .15597195-01 | .18122554+02 | .20648035+01 |
| .11693702+00 | .18851842+01 | .14990974-01 | .18718738+02 | .21989455+01 |
| .12042768+00 | .18852985+01 | .14410303-01 | .19360607+02 | .23428900+01 |
| .12391833+00 | .18854126+01 | .13852642-01 | .20053644+02 | .24978124+01 |
| .12740899+00 | .18855266+01 | .13315666-01 | .20804265+02 | .26650867+01 |
| .13089965+00 | .18856406+01 | .12797261-01 | .21620035+02 | .28463304+01 |
| .13439030+00 | .18857549+01 | .12295462-01 | .22509930+02 | .30434608+01 |
| .13788096+00 | .18858695+01 | .11808440-01 | .23484695+02 | .32587695+01 |
| .14049895+00 | .18859558+01 | .11451835-01 | .24279166+02 | .34338216+01 |
| .14311694+00 | .18860424+01 | .11101870-01 | .25135098+02 | .36220215+01 |
| .14573494+00 | .18861296+01 | .10757869-01 | .26060055+02 | .38249778+01 |
| .14835293+00 | .18862174+01 | .10419160-01 | .27062918+02 | .40445785+01 |
| .15097092+00 | .18863059+01 | .10085072-01 | .28154198+02 | .42830547+01 |
| .15358891+00 | .18863952+01 | .97549353-02 | .29346420+02 | .45430639+01 |
| .15620691+00 | .18864855+01 | .94280671-02 | .30654633+02 | .48277963+01 |
| .15882490+00 | .18865769+01 | .91037564-02 | .32097100+02 | .51411203+01 |
| .16144289+00 | .18866697+01 | .87812785-02 | .33696216+02 | .54877749+01 |
| .16406088+00 | .18867639+01 | .84598325-02 | .35479753+02 | .58736326+01 |
| .16667888+00 | .18868600+01 | .81385635-02 | .37482621+02 | .63060675+01 |
| .16929687+00 | .18869581+01 | .78165345-02 | .39749331+02 | .67944745+01 |
| .17104220+00 | .18870248+01 | .76008961-02 | .41434871+02 | .71570418+01 |
| .17278752+00 | .18870927+01 | .73840916-02 | .43284368+02 | .75543281+01 |
| .17453285+00 | .18871619+01 | .71657188-02 | .45323852+02 | .79918144+01 |

TABLE 24. (Concluded)

$$M_{\infty} = .49999942+01$$

$$\Theta_s = .43633230-01$$

| $\underline{\Theta}$ | $\underline{M_1^*}$ | $\underline{\psi_1}$ | $\underline{x}$ | $\underline{r}$ |
|----------------------|---------------------|----------------------|-----------------|-----------------|
| .17627816+00         | .18872332+01        | .69454294-02         | .47585278+02    | .84762241+01    |
| .17802346+00         | .18873062+01        | .67226533-02         | .50108473+02    | .90159305+01    |
| .17976876+00         | .18873812+01        | .64967647-02         | .52943607+02    | .96214752+01    |
| .18151405+00         | .18874582+01        | .62670931-02         | .56154912+02    | .10306344+02    |
| .18325935+00         | .18875377+01        | .60327798-02         | .59826076+02    | .11088094+02    |
| .18500465+00         | .18876200+01        | .57929046-02         | .64068459+02    | .11990069+02    |
| .18674995+00         | .18877056+01        | .55461675-02         | .69033739+02    | .13044040+02    |
| .18849525+00         | .18877951+01        | .52910410-02         | .74934642+02    | .14294523+02    |
| .19024055+00         | .18878892+01        | .50255321-02         | .82079901+02    | .15806068+02    |
| .19111320+00         | .18879383+01        | .48880763-02         | .86256433+02    | .16688416+02    |
| .19198585+00         | .18879891+01        | .47469102-02         | .90937298+02    | .17676385+02    |
| .19285849+00         | .18880416+01        | .46015307-02         | .96225527+02    | .18791469+02    |
| .19373114+00         | .18880962+01        | .44513270-02         | .10225551+03    | .20061691+02    |
| .19460379+00         | .18881530+01        | .42955093-02         | .10920620+03    | .21524342+02    |
| .19547644+00         | .18882127+01        | .41331127-02         | .11732212+03    | .23230352+02    |
| .19634909+00         | .18882755+01        | .39628670-02         | .12694763+03    | .25251395+02    |
| .19722174+00         | .18883422+01        | .37830546-02         | .13858576+03    | .27692099+02    |
| .19809439+00         | .18884137+01        | .35913847-02         | .15300635+03    | .30712488+02    |
| .19896704+00         | .18884913+01        | .33844635-02         | .17146064+03    | .34572441+02    |
| .19983969+00         | .18885770+01        | .31570084-02         | .19615506+03    | .39729863+02    |
| .20071234+00         | .18886744+01        | .29000156-02         | .23146465+03    | .47091888+02    |
| .20158499+00         | .18887904+01        | .25954023-02         | .28785977+03    | .58827219+02    |
| .20245764+00         | .18889444+01        | .21936297-02         | .40153295+03    | .82422643+02    |
| .20275525+00         | .18890169+01        | .20047103-02         | .48018153+03    | .98715773+02    |

$$.37997961-06 = \Delta S/R$$

$$.11561534+01 = P_s/P_{\infty}$$

$$.10909590+01 = \rho_s/\rho_{\infty}$$

$$.10597567+01 = T_s/T_{\infty}$$

TABLE 25. CONICAL FLOWFIELD  $\theta_s = 2.5$  DEG;  $M_\infty = 6.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .95760158+00 | .59999986+01 | .43633230-01 | .16973546+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .43633230-01 | .19151672+01 | .43633230-01 | .11451883+02 | .50000000+00 |
| .47123887-01 | .19151878+01 | .40399455-01 | .11683655+02 | .55098712+00 |
| .50614543-01 | .19152405+01 | .37604035-01 | .11929720+02 | .60433348+00 |
| .54105200-01 | .19153153+01 | .35157446-01 | .12190979+02 | .66023972+00 |
| .57595856-01 | .19154055+01 | .32993304-01 | .12468480+02 | .71892788+00 |
| .61086513-01 | .19155065+01 | .31061217-01 | .12763433+02 | .78064488+00 |
| .64577170-01 | .19156152+01 | .29322175-01 | .13077228+02 | .84566621+00 |
| .68067826-01 | .19157294+01 | .27745445-01 | .13411453+02 | .91430090+00 |
| .71558483-01 | .19158474+01 | .26306462-01 | .13767924+02 | .98689683+00 |
| .74612807-01 | .19159529+01 | .25144601-01 | .14099712+02 | .10539756+01 |
| .77667132-01 | .19160600+01 | .24061848-01 | .14451700+02 | .11246844+01 |
| .80721457-01 | .19161681+01 | .23048825-01 | .14825676+02 | .11993563+01 |
| .83775781-01 | .19162771+01 | .22097520-01 | .15223664+02 | .12783664+01 |
| .86830106-01 | .19163866+01 | .21201024-01 | .15647964+02 | .13621394+01 |
| .89884430-01 | .19164966+01 | .20353354-01 | .16101200+02 | .14511573+01 |
| .92938755-01 | .19166069+01 | .19549277-01 | .16586376+02 | .15459709+01 |
| .95993079-01 | .19167176+01 | .18784183-01 | .17106951+02 | .16472115+01 |
| .98611072-01 | .19168127+01 | .18156318-01 | .17584344+02 | .17396535+01 |
| .10122906+00 | .19169080+01 | .17551780-01 | .18093563+02 | .18378765+01 |
| .10384706+00 | .19170036+01 | .16968467-01 | .18637910+02 | .19424798+01 |
| .10646505+00 | .19170996+01 | .16404446-01 | .19221177+02 | .20541505+01 |
| .10908304+00 | .19171959+01 | .15857928-01 | .19847743+02 | .21736806+01 |
| .11170103+00 | .19172927+01 | .15327251-01 | .20522685+02 | .23019871+01 |
| .11431903+00 | .19173900+01 | .14810857-01 | .21251932+02 | .24401394+01 |
| .11693702+00 | .19174880+01 | .14307273-01 | .22042450+02 | .25893918+01 |
| .11911868+00 | .19175702+01 | .13896381-01 | .22753920+02 | .27233097+01 |
| .12130034+00 | .19176531+01 | .13492617-01 | .23519235+02 | .28669662+01 |
| .12348200+00 | .19177366+01 | .13095196-01 | .24344909+02 | .30215309+01 |
| .12566366+00 | .19178209+01 | .12703365-01 | .25238595+02 | .31883748+01 |
| .12784532+00 | .19179061+01 | .12316348-01 | .26209315+02 | .33691137+01 |
| .13002698+00 | .19179923+01 | .11933364-01 | .27267819+02 | .35656697+01 |
| .13220864+00 | .19180797+01 | .11553621-01 | .28427000+02 | .37803463+01 |
| .13439030+00 | .19181684+01 | .11176286-01 | .29702482+02 | .40159316+01 |
| .13613563+00 | .19182405+01 | .10875564-01 | .30819316+02 | .42217195+01 |
| .13788096+00 | .19183137+01 | .10575339-01 | .32034573+02 | .44451625+01 |
| .13962629+00 | .19183880+01 | .10275099-01 | .33362409+02 | .46887789+01 |
| .14137162+00 | .19184637+01 | .99742822-02 | .34819925+02 | .49556071+01 |
| .14311694+00 | .19185409+01 | .96722767-02 | .36427968+02 | .52493481+01 |
| .14486225+00 | .19186203+01 | .93684755-02 | .38212240+02 | .55745597+01 |
| .14660755+00 | .19187018+01 | .90620425-02 | .40204924+02 | .59369420+01 |

TABLE 25. (Concluded)

$$M_{\infty} = .59999986+01$$

$$\Theta_s = .43633230-01$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .14835285+00 | .17187855+01 | .87520424-02 | .42446773+02 | .63437065+01 |
| .14966182+00 | .19188499+01 | .85165873-02 | .44322701+02 | .66833904+01 |
| .15097079+00 | .19189159+01 | .82780197-02 | .46395936+02 | .70581363+01 |
| .15227977+00 | .19189836+01 | .80357622-02 | .48701166+02 | .74740639+01 |
| .15358874+00 | .19190533+01 | .77890996-02 | .51282045+02 | .79388676+01 |
| .15489772+00 | .19191252+01 | .75372122-02 | .54194361+02 | .84623711+01 |
| .15620669+00 | .19191997+01 | .72791018-02 | .57510745+02 | .90573510+01 |
| .15751566+00 | .19192771+01 | .70135538-02 | .61327769+02 | .97407776+01 |
| .15882464+00 | .19193580+01 | .67390222-02 | .65776993+02 | .10535745+02 |
| .15969729+00 | .19194142+01 | .65500643-02 | .69182590+02 | .11143162+02 |
| .16056994+00 | .19194724+01 | .63555054-02 | .73023241+02 | .11827157+02 |
| .16144259+00 | .19195330+01 | .61544646-02 | .77395184+02 | .12604576+02 |
| .16231523+00 | .19195963+01 | .59458092-02 | .82427025+02 | .13497910+02 |
| .16318788+00 | .19196627+01 | .57281125-02 | .88295189+02 | .14537985+02 |
| .16406053+00 | .19197331+01 | .54994989-02 | .95249658+02 | .15768437+02 |
| .16493318+00 | .19198080+01 | .52573998-02 | .10365901+03 | .17253543+02 |
| .16580583+00 | .19198888+01 | .49982518-02 | .11409479+03 | .19092867+02 |
| .16624216+00 | .19199319+01 | .48606917-02 | .12034585+03 | .20192917+02 |
| .16667848+00 | .19199772+01 | .47166348-02 | .12750473+03 | .21451315+02 |
| .16711481+00 | .19200251+01 | .45648683-02 | .13581289+03 | .22910014+02 |
| .16755113+00 | .19200761+01 | .44037811-02 | .14561437+03 | .24628756+02 |
| .16798745+00 | .19201309+01 | .42311270-02 | .15742119+03 | .26696381+02 |
| .16842378+00 | .19201908+01 | .40436126-02 | .17204011+03 | .29252769+02 |
| .16886010+00 | .19202572+01 | .38360655-02 | .19084500+03 | .32535936+02 |
| .16929643+00 | .19203332+01 | .35995003-02 | .21645467+03 | .36999160+02 |
| .16973275+00 | .19204248+01 | .33153147-02 | .25486795+03 | .43679706+02 |
| .16973546+00 | .19204255+01 | .33133272-02 | .25517337+03 | .43732759+02 |

$$.30114315-05 = \Delta S/R$$

$$.12094528+01 = P_s/P_{\infty}$$

$$.11206612+01 = \rho_s/\rho_{\infty}$$

$$.10790389+01 = T_s/T_{\infty}$$

TABLE 26. CONICAL FLOWFIELD  $\theta_s = 2.5$  DEG;  $M_\infty = 8.0$

| $u_s$        | $M_\infty$    | $\theta_s$   | $\theta_w$   |              |
|--------------|---------------|--------------|--------------|--------------|
| .97455476+00 | .800000615+01 | .43633230-01 | .12995520+00 |              |
| $\theta$     | $M_1^*$       | $\psi_1$     | $x$          | $r$          |
| .43633230-01 | .19490730+01  | .43633230-01 | .11451883+02 | .50000000+00 |
| .46251222-01 | .19490852+01  | .41162170-01 | .11681055+02 | .54064862+00 |
| .48869215-01 | .19491175+01  | .38949769-01 | .11924267+02 | .58319391+00 |
| .51487207-01 | .19491650+01  | .36952359-01 | .12182539+02 | .62779973+00 |
| .54105200-01 | .19492243+01  | .35135727-01 | .12457034+02 | .67464875+00 |
| .56723192-01 | .19492927+01  | .33472602-01 | .12749083+02 | .72394525+00 |
| .59341185-01 | .19493684+01  | .31940925-01 | .13060202+02 | .77591880+00 |
| .61959177-01 | .19494497+01  | .30522616-01 | .13392124+02 | .83082844+00 |
| .64577170-01 | .19495357+01  | .29202682-01 | .13746837+02 | .88896787+00 |
| .67195162-01 | .19496255+01  | .27968548-01 | .14126618+02 | .95067160+00 |
| .69376823-01 | .19497028+01  | .26997914-01 | .14464136+02 | .10050888+01 |
| .71558483-01 | .19497820+01  | .26074107-01 | .14822616+02 | .10624981+01 |
| .73740143-01 | .19498629+01  | .25192418-01 | .15204029+02 | .11231838+01 |
| .75921804-01 | .19499454+01  | .24348652-01 | .15610616+02 | .11874685+01 |
| .78103464-01 | .19500292+01  | .23539052-01 | .16044938+02 | .12557196+01 |
| .80285124-01 | .19501144+01  | .22760234-01 | .16509938+02 | .13283577+01 |
| .82466785-01 | .19502010+01  | .22009116-01 | .17009012+02 | .14058670+01 |
| .84646445-01 | .19502888+01  | .21282879-01 | .17546102+02 | .14888078+01 |
| .86830106-01 | .19503780+01  | .20578918-01 | .18125810+02 | .15778333+01 |
| .88575434-01 | .19504503+01  | .20030149-01 | .18623867+02 | .16539448+01 |
| .90320762-01 | .19505234+01  | .19492898-01 | .19155866+02 | .17348926+01 |
| .92066091-01 | .19505975+01  | .18966029-01 | .19725510+02 | .18211990+01 |
| .93811419-01 | .19506726+01  | .18448439-01 | .20337090+02 | .19134677+01 |
| .95556747-01 | .19507488+01  | .17939050-01 | .20995596+02 | .20123997+01 |
| .97302075-01 | .19508262+01  | .17436791-01 | .21706880+02 | .21188154+01 |
| .99047404-01 | .19509047+01  | .16940589-01 | .22477848+02 | .22336816+01 |
| .10079273+00 | .19509847+01  | .16449353-01 | .23316720+02 | .23581468+01 |
| .10253806+00 | .19510662+01  | .15961959-01 | .24233358+02 | .24935869+01 |
| .10384706+00 | .19511284+01  | .15598226-01 | .24978971+02 | .26033576+01 |
| .10515605+00 | .19511917+01  | .15235469-01 | .25781005+02 | .27210657+01 |
| .10646505+00 | .19512560+01  | .14873127-01 | .26646503+02 | .28476886+01 |
| .10777405+00 | .19513216+01  | .14510602-01 | .27583782+02 | .29843795+01 |
| .10908303+00 | .19513887+01  | .14147260-01 | .28602741+02 | .31325083+01 |
| .11039201+00 | .19514577+01  | .13782398-01 | .29715293+02 | .32937212+01 |
| .11170098+00 | .19515283+01  | .13415192-01 | .30935912+02 | .34700156+01 |
| .11300796+00 | .19516008+01  | .13044749-01 | .32282345+02 | .36638368+01 |
| .11431893+00 | .19516753+01  | .12670037-01 | .33776670+02 | .38782220+01 |
| .11519158+00 | .19517263+01  | .12417273-01 | .34868506+02 | .40344183+01 |
| .11606423+00 | .19517784+01  | .12161679-01 | .36048379+02 | .42028161+01 |
| .11693688+00 | .19518317+01  | .11902787-01 | .37328289+02 | .43850591+01 |

TABLE 26. (Concluded)

$$M_{\infty} = .00000615+01$$

$$\Theta_s = .43633230-01$$

| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .11790953+00 | .19516865+01 | .11640074-01 | .38722651+02 | .45831199+01 |
| .11868218+00 | .19519427+01 | .11372927-01 | .40248960+02 | .47993891+01 |
| .11955483+00 | .19520004+01 | .11100648-01 | .41928683+02 | .50367967+01 |
| .12042747+00 | .19520605+01 | .10822400-01 | .43788532+02 | .52989838+01 |
| .12130012+00 | .19521224+01 | .10537185-01 | .45862218+02 | .55905387+01 |
| .12217277+00 | .19521868+01 | .10243781-01 | .48193066+02 | .59173509+01 |
| .12260910+00 | .19522201+01 | .10093553-01 | .49471999+02 | .60962963+01 |
| .12304542+00 | .19522541+01 | .99406885-02 | .50837846+02 | .62871255+01 |
| .12348175+00 | .19522889+01 | .97849295-02 | .52300794+02 | .64912190+01 |
| .12391807+00 | .19523246+01 | .96259965-02 | .53872788+02 | .67101937+01 |
| .12435440+00 | .19523613+01 | .94635636-02 | .55567978+02 | .69459633+01 |
| .12479072+00 | .19523990+01 | .92972396-02 | .57403264+02 | .72008122+01 |
| .12522705+00 | .19524380+01 | .91265924-02 | .59399024+02 | .74774919+01 |
| .12566337+00 | .19524782+01 | .89510921-02 | .61580153+02 | .77793612+01 |
| .12609969+00 | .19525200+01 | .87701138-02 | .63977440+02 | .81105703+01 |
| .12653602+00 | .19525634+01 | .85829105-02 | .66629505+02 | .84763196+01 |
| .12697234+00 | .19526086+01 | .83885472-02 | .69585734+02 | .88832535+01 |
| .12740867+00 | .19526561+01 | .81858598-02 | .72910494+02 | .93400223+01 |
| .12784499+00 | .19527061+01 | .79733655-02 | .76689728+02 | .98581643+01 |
| .12828132+00 | .19527592+01 | .77491123-02 | .81041863+02 | .10453561+02 |
| .12871764+00 | .19528160+01 | .75104181-02 | .86135827+02 | .11148841+02 |
| .12915397+00 | .19528775+01 | .72534997-02 | .92224595+02 | .11977846+02 |
| .12959029+00 | .19529451+01 | .69726203-02 | .99711520+02 | .12994468+02 |
| .12995520+00 | .19530080+01 | .67126844-02 | .10754308+03 | .14054992+02 |

$$.57142228-04 = \Delta S/R$$

$$.13338664+01 = P_s/P_{\infty}$$

$$.11886554+01 = \rho_s/\rho_{\infty}$$

$$.11221641+01 = T_s/T_{\infty}$$



TABLE 27. CONICAL FLOWFIELD  $\theta_s = 2.5$  DEG;  $M_\infty = 10.0$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .98280676+00 | .99999409+01 | .43633230-01 | .10750390+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .43633230-01 | .19655767+01 | .43633230-01 | .11451883+02 | .50000000+00 |
| .45378558-01 | .19655823+01 | .41954444-01 | .11638675+02 | .52850910+00 |
| .47123887-01 | .19655978+01 | .40397017-01 | .11834801+02 | .55811501+00 |
| .48869215-01 | .19656216+01 | .38945636-01 | .12040855+02 | .58889598+00 |
| .50614543-01 | .19656522+01 | .37587495-01 | .12257495+02 | .62093784+00 |
| .52359872-01 | .19656887+01 | .36311773-01 | .12485458+02 | .65433502+00 |
| .54105200-01 | .19657301+01 | .35109241-01 | .12725561+02 | .68919146+00 |
| .55850528-01 | .19657758+01 | .33971964-01 | .12978721+02 | .72562301+00 |
| .57595856-01 | .19658253+01 | .32893067-01 | .13245957+02 | .76375695+00 |
| .59341185-01 | .19658780+01 | .31866541-01 | .13528416+02 | .80373587+00 |
| .61086513-01 | .19659335+01 | .30887107-01 | .13827386+02 | .84571899+00 |
| .62831841-01 | .19659917+01 | .29950088-01 | .14144317+02 | .88988482+00 |
| .64577170-01 | .19660522+01 | .29051316-01 | .14480853+02 | .93643457+00 |
| .66322498-01 | .19661148+01 | .28187048-01 | .14838859+02 | .98559571+00 |
| .68067826-01 | .19661795+01 | .27353898-01 | .15220462+02 | .10376267+01 |
| .69813155-01 | .19662460+01 | .26548784-01 | .15628100+02 | .10928229+01 |
| .71122151-01 | .19662971+01 | .25961634-01 | .15952587+02 | .11364992+01 |
| .72431147-01 | .19663492+01 | .25387540-01 | .16294632+02 | .11823072+01 |
| .73740143-01 | .19664023+01 | .24825444-01 | .16655744+02 | .12304279+01 |
| .75049140-01 | .19664564+01 | .24274331-01 | .17037614+02 | .12810643+01 |
| .76358136-01 | .19665115+01 | .23733228-01 | .17442154+02 | .13344449+01 |
| .77667132-01 | .19665676+01 | .23201192-01 | .17871527+02 | .13908279+01 |
| .78976128-01 | .19666247+01 | .22677305-01 | .18328202+02 | .14505073+01 |
| .80285124-01 | .19666829+01 | .22160660-01 | .18814996+02 | .15138182+01 |
| .81594121-01 | .19667423+01 | .21650360-01 | .19335155+02 | .15811453+01 |
| .82903117-01 | .19668028+01 | .21145500-01 | .19892431+02 | .16529331+01 |
| .84212113-01 | .19668646+01 | .20645167-01 | .20491193+02 | .17296974+01 |
| .85521109-01 | .19669277+01 | .20148421-01 | .21136562+02 | .18120420+01 |
| .86830106-01 | .19669922+01 | .19654281-01 | .21834584+02 | .19006783+01 |
| .88139102-01 | .19670583+01 | .19161713-01 | .22592461+02 | .19964517+01 |
| .89448098-01 | .19671261+01 | .18669609-01 | .23418851+02 | .21003763+01 |
| .90320755-01 | .19671724+01 | .18341217-01 | .24012939+02 | .21747838+01 |
| .91193404-01 | .19672199+01 | .18012115-01 | .24645786+02 | .22537842+01 |
| .92066053-01 | .19672683+01 | .17681872-01 | .25321650+02 | .23378734+01 |
| .92938703-01 | .19673177+01 | .17350030-01 | .26045460+02 | .24276249+01 |
| .93811352-01 | .19673682+01 | .17016087-01 | .26822985+02 | .25237081+01 |
| .94684001-01 | .19674200+01 | .16679477-01 | .27661010+02 | .26269099+01 |
| .95556650-01 | .19674730+01 | .16339578-01 | .28567597+02 | .27381630+01 |
| .96429300-01 | .19675275+01 | .15995675-01 | .29552403+02 | .28585832+01 |
| .97301949-01 | .19675837+01 | .15646958-01 | .30627120+02 | .29895190+01 |

TABLE 27. (Concluded)

$$M_{\infty} = .99999409+01$$

$$\Theta_s = .43633230-01$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .98174598-01 | .19676415+01 | .15292477-01 | .31806077+02 | .31326195+01 |
| .99047247-01 | .19677014+01 | .14931119-01 | .33107054+02 | .32899280+01 |
| .99919897-01 | .19677635+01 | .14561545-01 | .34552467+02 | .34640147+01 |
| .10079255+00 | .19678283+01 | .14182129-01 | .36171061+02 | .36581696+01 |
| .10166520+00 | .19678960+01 | .13790855-01 | .38000478+02 | .38766914+01 |
| .10253784+00 | .19679672+01 | .13385158-01 | .40091244+02 | .41253377+01 |
| .10297417+00 | .19680043+01 | .13175890-01 | .41255456+02 | .42633259+01 |
| .10341049+00 | .19680426+01 | .12961672-01 | .42513227+02 | .44120521+01 |
| .10384682+00 | .19680822+01 | .12741903-01 | .43878106+02 | .45730522+01 |
| .10428314+00 | .19681232+01 | .12515849-01 | .45366672+02 | .47482037+01 |
| .10471947+00 | .19681658+01 | .12282646-01 | .46999488+02 | .49398314+01 |
| .10515579+00 | .19682101+01 | .12041233-01 | .48802453+02 | .51508601+01 |
| .10559212+00 | .19682566+01 | .11790290-01 | .50808836+02 | .53850411+01 |
| .10602844+00 | .19683055+01 | .11528137-01 | .53062313+02 | .56472924+01 |
| .10646477+00 | .19683573+01 | .11252598-01 | .55621778+02 | .59442351+01 |
| .10690109+00 | .19684126+01 | .10960744-01 | .58569347+02 | .62850869+01 |
| .10733742+00 | .19684721+01 | .10648476-01 | .62024365+02 | .66832212+01 |
| .10750390+00 | .19684962+01 | .10522773-01 | .63512424+02 | .68542585+01 |

$$.41482598-03 = \Delta S/R$$

$$.14816294+01 = P_s/P_{\infty}$$

$$.12458133+01 = \rho_s/\rho_{\infty}$$

$$.11704960+01 = T_s/T_{\infty}$$



TABLE 28. CONICAL FLOWFIELD  $\theta_s = 2.5$  DEG;  $M_\infty = 12.5$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .98827663+00 | .12499995+02 | .43633230-01 | .90798791-01 |              |
| $\theta$     | $M^*_1$      | $\psi_1$     | $x$          | $r$          |
| .43633230-01 | .19765162+01 | .43633230-01 | .11451883+02 | .50000000+00 |
| .44505894-01 | .19765176+01 | .42777560-01 | .11564694+02 | .51503715+00 |
| .45378558-01 | .19765219+01 | .41954182-01 | .11680896+02 | .53042634+00 |
| .46251222-01 | .19765286+01 | .41160737-01 | .11800624+02 | .54618278+00 |
| .47123887-01 | .19765375+01 | .40395096-01 | .11924023+02 | .56232258+00 |
| .47996551-01 | .19765486+01 | .39655323-01 | .12051247+02 | .57886287+00 |
| .48869215-01 | .19765615+01 | .38939656-01 | .12182463+02 | .59582177+00 |
| .49741879-01 | .19765762+01 | .38246486-01 | .12317845+02 | .61321857+00 |
| .50614543-01 | .19765925+01 | .37574336-01 | .12457582+02 | .63107381+00 |
| .51487207-01 | .19766103+01 | .36921850-01 | .12601877+02 | .64940938+00 |
| .52359872-01 | .19766295+01 | .36287775-01 | .12750945+02 | .66824860+00 |
| .53232536-01 | .19766501+01 | .35670954-01 | .12905018+02 | .68761642+00 |
| .54105200-01 | .19766718+01 | .35070312-01 | .13064345+02 | .70753950+00 |
| .54977864-01 | .19766947+01 | .34484851-01 | .13229192+02 | .72804638+00 |
| .55850528-01 | .19767187+01 | .33913638-01 | .13399848+02 | .74916771+00 |
| .56723192-01 | .19767437+01 | .33355803-01 | .13576623+02 | .77093638+00 |
| .57595856-01 | .19767696+01 | .32810527-01 | .13759850+02 | .79338781+00 |
| .58468521-01 | .19767965+01 | .32277041-01 | .13949891+02 | .81656015+00 |
| .59341185-01 | .19768243+01 | .31754618-01 | .14147135+02 | .84049456+00 |
| .60213849-01 | .19768530+01 | .31242573-01 | .14352009+02 | .86523562+00 |
| .61086513-01 | .19768824+01 | .30740252-01 | .14564970+02 | .89083156+00 |
| .61959177-01 | .19769127+01 | .30247035-01 | .14786520+02 | .91733474+00 |
| .62831841-01 | .19769438+01 | .29762326-01 | .15017204+02 | .94480216+00 |
| .63704506-01 | .19769756+01 | .29285557-01 | .15257619+02 | .97329600+00 |
| .64577170-01 | .19770082+01 | .28816178-01 | .15508417+02 | .10028841+01 |
| .65449834-01 | .19770415+01 | .28353656-01 | .15770315+02 | .10336408+01 |
| .66322498-01 | .19770756+01 | .27897476-01 | .16044102+02 | .10656478+01 |
| .67195162-01 | .19771105+01 | .27447133-01 | .16330647+02 | .10989950+01 |
| .68067826-01 | .19771461+01 | .27002133-01 | .16630912+02 | .11337815+01 |
| .68940490-01 | .19771824+01 | .26561985-01 | .16945965+02 | .11701174+01 |
| .69813155-01 | .19772195+01 | .26126203-01 | .17276996+02 | .12081249+01 |
| .70685819-01 | .19772574+01 | .25694303-01 | .17625332+02 | .12479401+01 |
| .71558483-01 | .19772961+01 | .25265793-01 | .17992464+02 | .12897155+01 |
| .72431147-01 | .19773357+01 | .24840179-01 | .18380065+02 | .13336222+01 |
| .73303811-01 | .19773761+01 | .24416951-01 | .18790035+02 | .13798535+01 |
| .74176475-01 | .19774174+01 | .23995590-01 | .19224524+02 | .14286285+01 |
| .75049140-01 | .19774597+01 | .23575546-01 | .19685988+02 | .14801965+01 |
| .75921804-01 | .19775030+01 | .23156251-01 | .20177248+02 | .15348432+01 |
| .76794468-01 | .19775473+01 | .22737095-01 | .20701560+02 | .15928978+01 |
| .77667125-01 | .19775929+01 | .22317431-01 | .21262699+02 | .16547412+01 |

TABLE 28. (Concluded)

$$M_{\infty} = .12499995+02$$

$$\Theta_s = .43633230-01$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $\bar{x}$    | $\bar{r}$    |
|--------------|--------------|--------------|--------------|--------------|
| .78539774-01 | .19776400+01 | .21896551-01 | .21865102+02 | .17208199+01 |
| .79412423-01 | .19776883+01 | .21473674-01 | .22513994+02 | .17916586+01 |
| .80285072-01 | .19777381+01 | .21047942-01 | .23215583+02 | .18678797+01 |
| .81157722-01 | .19777894+01 | .20618387-01 | .23977333+02 | .19502293+01 |
| .82030371-01 | .19778424+01 | .20183899-01 | .24808297+02 | .20396107+01 |
| .82903020-01 | .19778973+01 | .19743199-01 | .25719606+02 | .21371313+01 |
| .83775669-01 | .19779544+01 | .19294797-01 | .26725143+02 | .22441693+01 |
| .84648319-01 | .19780138+01 | .18836858-01 | .27842493+02 | .23624655+01 |
| .85520968-01 | .19780760+01 | .18367172-01 | .29094368+02 | .24942623+01 |
| .85957292-01 | .19781083+01 | .18127087-01 | .29779760+02 | .25661106+01 |
| .86393617-01 | .19781415+01 | .17882968-01 | .30510768+02 | .26425133+01 |
| .86829942-01 | .19781756+01 | .17634341-01 | .31292838+02 | .27240045+01 |
| .87266266-01 | .19782107+01 | .17380662-01 | .32132408+02 | .28112150+01 |
| .87702591-01 | .19782470+01 | .17121293-01 | .33037176+02 | .29048976+01 |
| .88138916-01 | .19782846+01 | .16855486-01 | .34016424+02 | .30059586+01 |
| .88575240-01 | .19783235+01 | .16582350-01 | .35081500+02 | .31155041+01 |
| .89011565-01 | .19783641+01 | .16300817-01 | .36246458+02 | .32349018+01 |
| .89447889-01 | .19784064+01 | .16009572-01 | .37529017+02 | .33658728+01 |
| .89884214-01 | .19784509+01 | .15706973-01 | .38951910+02 | .35106212+01 |
| .90320539-01 | .19784978+01 | .15390930-01 | .40545012+02 | .36720380+01 |
| .90756863-01 | .19785476+01 | .15058697-01 | .42348679+02 | .38540206+01 |
| .90798791-01 | .19785525+01 | .15025790-01 | .42535051+02 | .38727800+01 |

$$.22468902-02 = \Delta S/R$$

$$.16993700+01 = P_s/P_{\infty}$$

$$.13733451+01 = \rho_s/\rho_{\infty}$$

$$.12373948+01 = T_s/T_{\infty}$$

TABLE 29. CONICAL FLOWFIELD  $\theta_s = 2.5 \text{ DEG}$ ;  $M_\infty = 15.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .99133593+00 | .14999971+02 | .43633230-01 | .80522289-01 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .43633230-01 | .19826347+01 | .43633230-01 | .11451883+02 | .50000000+00 |
| .44505894-01 | .19826361+01 | .42777522-01 | .11583953+02 | .51589486+00 |
| .45378558-01 | .19826404+01 | .41953890-01 | .11720682+02 | .53223300+00 |
| .46251222-01 | .19826471+01 | .41159796-01 | .11862298+02 | .54903733+00 |
| .47123887-01 | .19826560+01 | .40392956-01 | .12009051+02 | .56633242+00 |
| .47996551-01 | .19826671+01 | .39651305-01 | .12161209+02 | .58414472+00 |
| .48869215-01 | .19826802+01 | .38932969-01 | .12319063+02 | .60250264+00 |
| .49741879-01 | .19826950+01 | .38236237-01 | .12482927+02 | .62143686+00 |
| .50614543-01 | .19827115+01 | .37559544-01 | .12653143+02 | .64098047+00 |
| .51487207-01 | .19827295+01 | .36901449-01 | .12830080+02 | .66116931+00 |
| .52359872-01 | .19827491+01 | .36260621-01 | .13014143+02 | .68204226+00 |
| .53232536-01 | .19827700+01 | .35635827-01 | .13205771+02 | .70364142+00 |
| .54105200-01 | .19827921+01 | .35025917-01 | .13405445+02 | .72601283+00 |
| .54977864-01 | .19828156+01 | .34429815-01 | .13613689+02 | .74920651+00 |
| .55850528-01 | .19828402+01 | .33846512-01 | .13831080+02 | .77327731+00 |
| .56723192-01 | .19828660+01 | .33275053-01 | .14058253+02 | .79828531+00 |
| .57595856-01 | .19828928+01 | .32714534-01 | .14295906+02 | .82429659+00 |
| .58468521-01 | .19829208+01 | .32164089-01 | .14544811+02 | .85138393+00 |
| .59341185-01 | .19829498+01 | .31622893-01 | .14805825+02 | .87962790+00 |
| .60213849-01 | .19829798+01 | .31090144-01 | .15079900+02 | .90911777+00 |
| .61086513-01 | .19830109+01 | .30565068-01 | .15368098+02 | .93995296+00 |
| .61959177-01 | .19830430+01 | .30046904-01 | .15671610+02 | .97224452+00 |
| .62831841-01 | .19830762+01 | .29534902-01 | .15991774+02 | .10061169+01 |
| .63704506-01 | .19831103+01 | .29028321-01 | .16330100+02 | .10417105+01 |
| .64577170-01 | .19831455+01 | .28526412-01 | .16688300+02 | .10791837+01 |
| .65013502-01 | .19831636+01 | .28027697-01 | .16875452+02 | .10986806+01 |
| .65449834-01 | .19831819+01 | .28028422-01 | .17068326+02 | .11187170+01 |
| .65886166-01 | .19832004+01 | .27780654-01 | .17267210+02 | .11343193+01 |
| .66322498-01 | .19832193+01 | .27533574-01 | .17472414+02 | .11605162+01 |
| .66758830-01 | .19832384+01 | .27287082-01 | .17684270+02 | .11823381+01 |
| .67195162-01 | .19832579+01 | .27041071-01 | .17903138+02 | .12048181+01 |
| .67631494-01 | .19832776+01 | .26795438-01 | .18129405+02 | .12279916+01 |
| .68067826-01 | .19832977+01 | .26550076-01 | .18363487+02 | .12518966+01 |
| .68504158-01 | .19833180+01 | .26304868-01 | .18605838+02 | .12765748+01 |
| .68940490-01 | .19833388+01 | .26059700-01 | .18856948+02 | .13020706+01 |
| .69376823-01 | .19833598+01 | .25814449-01 | .19117349+02 | .13284329+01 |
| .69813147-01 | .19833814+01 | .25568992-01 | .19387620+02 | .13557139+01 |
| .70249472-01 | .19834033+01 | .25323193-01 | .19668400+02 | .13839721+01 |
| .70685796-01 | .19834256+01 | .25076910-01 | .19960383+02 | .14132701+01 |
| .71122121-01 | .19834483+01 | .24829998-01 | .20264333+02 | .14436773+01 |

TABLE 29. (Concluded)

$$M_{\infty} = .14999971+02$$

$$\Theta_s = .43633230-01$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .71558446-01 | .19834714+01 | .24582298-01 | .20581084+02 | .14752693+01 |
| .71994770-01 | .19834950+01 | .24333648-01 | .20911561+02 | .15081296+01 |
| .72431095-01 | .19835189+01 | .24083870-01 | .21256789+02 | .15423506+01 |
| .72867420-01 | .19835434+01 | .23832769-01 | .21617902+02 | .15780346+01 |
| .73303744-01 | .19835684+01 | .23580142-01 | .21996166+02 | .16152955+01 |
| .73740069-01 | .19835939+01 | .23325767-01 | .22392998+02 | .16542607+01 |
| .74176393-01 | .19836198+01 | .23069401-01 | .22809986+02 | .16950724+01 |
| .74612718-01 | .19836465+01 | .22810777-01 | .23248927+02 | .17378918+01 |
| .75049043-01 | .19836737+01 | .22549600-01 | .23711851+02 | .17829003+01 |
| .75485367-01 | .19837016+01 | .22285552-01 | .24201081+02 | .18303052+01 |
| .75921692-01 | .19837302+01 | .22018267-01 | .24719268+02 | .18803429+01 |
| .76358017-01 | .19837596+01 | .21747339-01 | .25269477+02 | .19332859+01 |
| .76794341-01 | .19837898+01 | .21472310-01 | .25855262+02 | .19894501+01 |
| .77230666-01 | .19838209+01 | .21192658-01 | .26480788+02 | .20492046+01 |
| .77666990-01 | .19838530+01 | .20907781-01 | .27150959+02 | .21129836+01 |
| .78103315-01 | .19838862+01 | .20616981-01 | .27871624+02 | .21813034+01 |
| .78539640-01 | .19839205+01 | .20319441-01 | .28649819+02 | .22547845+01 |
| .78975964-01 | .19839563+01 | .20014186-01 | .29494118+02 | .23341813+01 |
| .79412289-01 | .19839935+01 | .19700046-01 | .30415110+02 | .24204235+01 |
| .79848614-01 | .19840324+01 | .19375588-01 | .31426098+02 | .25146769+01 |
| .80284938-01 | .19840733+01 | .19039026-01 | .32544094+02 | .26184288+01 |
| .80522289-01 | .19840964+01 | .18850076-01 | .33204950+02 | .26795323+01 |

$$.72626472-02 = \Delta S/R$$

$$.19547292+01 = P_s/P_{\infty}$$

$$.14906881+01 = \rho_s/\rho_{\infty}$$

$$.13112932+01 = T_s/T_{\infty}$$

3 TABLE 30. CONICAL FLOWFIELD  $\theta_s = 2.5 \text{ DEG}$ ;  $M_\infty = 17.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .99322379+00 | .17500023+02 | .43633230-01 | .73717203-01 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .43633230-01 | .19864103+01 | .43633230-01 | .11451883+02 | .50000000+00 |
| .44069562-01 | .19864107+01 | .43201191-01 | .11526178+02 | .50828267+00 |
| .44505894-01 | .19864118+01 | .42777481-01 | .11601938+02 | .51669580+00 |
| .44942226-01 | .19864136+01 | .42361727-01 | .11679204+02 | .52524311+00 |
| .45378558-01 | .19864160+01 | .41953579-01 | .11758021+02 | .53392857+00 |
| .45814890-01 | .19864191+01 | .41552704-01 | .11838432+02 | .54275626+00 |
| .46251222-01 | .19864228+01 | .41158790-01 | .11920485+02 | .55173045+00 |
| .46687555-01 | .19864270+01 | .40771537-01 | .12004228+02 | .56085560+00 |
| .47123887-01 | .19864318+01 | .40390663-01 | .12089713+02 | .57013632+00 |
| .47560219-01 | .19864371+01 | .40015901-01 | .12176993+02 | .57957751+00 |
| .47996551-01 | .19864429+01 | .39646992-01 | .12266125+02 | .58918419+00 |
| .48432883-01 | .19864493+01 | .39283693-01 | .12357168+02 | .59896169+00 |
| .48869215-01 | .19864561+01 | .38925772-01 | .12450184+02 | .60891551+00 |
| .49305547-01 | .19864633+01 | .38573004-01 | .12545236+02 | .61905142+00 |
| .49741879-01 | .19864710+01 | .38225176-01 | .12642393+02 | .62937554+00 |
| .50178211-01 | .19864791+01 | .37882084-01 | .12741726+02 | .63989413+00 |
| .50614543-01 | .19864877+01 | .37543529-01 | .12843309+02 | .65061391+00 |
| .51050875-01 | .19864966+01 | .37209324-01 | .12947222+02 | .66154183+00 |
| .51487207-01 | .19865060+01 | .36879284-01 | .13053548+02 | .67268522+00 |
| .51923539-01 | .19865157+01 | .36553234-01 | .13162372+02 | .68405179+00 |
| .52359872-01 | .19865258+01 | .36231005-01 | .13273787+02 | .69564961+00 |
| .52796204-01 | .19865362+01 | .35912429-01 | .13387889+02 | .70748717+00 |
| .53232536-01 | .19865470+01 | .35597350-01 | .13504780+02 | .71957345+00 |
| .53668868-01 | .19865582+01 | .35285609-01 | .13624567+02 | .73191793+00 |
| .54105200-01 | .19865697+01 | .34977058-01 | .13747364+02 | .74453053+00 |
| .54541532-01 | .19865815+01 | .34671549-01 | .13873292+02 | .75742177+00 |
| .54977864-01 | .19865937+01 | .34368936-01 | .14002476+02 | .77060277+00 |
| .55414196-01 | .19866062+01 | .34069082-01 | .14135052+02 | .78408527+00 |
| .55850528-01 | .19866190+01 | .33771846-01 | .14271163+02 | .79788173+00 |
| .56286860-01 | .19866322+01 | .33477094-01 | .14410959+02 | .81200532+00 |
| .56723192-01 | .19866457+01 | .33184693-01 | .14554602+02 | .82647005+00 |
| .57159524-01 | .19866595+01 | .32894510-01 | .14702263+02 | .84129077+00 |
| .57595856-01 | .19866735+01 | .32606416-01 | .14854124+02 | .85648327+00 |
| .58032189-01 | .19866880+01 | .32320281-01 | .15010381+02 | .87206440+00 |
| .58468521-01 | .19867027+01 | .32035978-01 | .15171239+02 | .88805208+00 |
| .58904853-01 | .19867178+01 | .31753377-01 | .15336922+02 | .90446546+00 |
| .59341185-01 | .19867331+01 | .31472350-01 | .15507666+02 | .92132498+00 |
| .59777517-01 | .19867488+01 | .31192771-01 | .15683728+02 | .93865258+00 |
| .60213849-01 | .19867648+01 | .30914510-01 | .15865378+02 | .95647170+00 |
| .60650181-01 | .19867812+01 | .30637435-01 | .16052911+02 | .97480751+00 |

TABLE 30. (Concluded)

$$M_{\infty} = .17500023+02$$

$$\Theta_s = .43633230-01$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .61086513-01 | .19867978+01 | .30361417-01 | .16246644+02 | .99368715+00 |
| .61522845-01 | .19868148+01 | .30086321-01 | .16446918+02 | .10131397+01 |
| .61959177-01 | .19868322+01 | .29812010-01 | .16654101+02 | .10331969+01 |
| .62395509-01 | .19868499+01 | .29538346-01 | .16868593+02 | .10538924+01 |
| .62831841-01 | .19868679+01 | .29265185-01 | .17090827+02 | .10752634+01 |
| .63268173-01 | .19868863+01 | .28992380-01 | .17321274+02 | .10973499+01 |
| .63704506-01 | .19869051+01 | .28719777-01 | .17560447+02 | .11201953+01 |
| .64140838-01 | .19869242+01 | .28447219-01 | .17808905+02 | .11438471+01 |
| .64577170-01 | .19869438+01 | .28174539-01 | .18067262+02 | .11683572+01 |
| .65013494-01 | .19869639+01 | .27901565-01 | .18336190+02 | .11937822+01 |
| .65449819-01 | .19869845+01 | .27628112-01 | .18616436+02 | .12201851+01 |
| .65886144-01 | .19870055+01 | .27353986-01 | .18908817+02 | .12476349+01 |
| .66322468-01 | .19870269+01 | .27078982-01 | .19214242+02 | .12762076+01 |
| .66758793-01 | .19870488+01 | .26802877-01 | .19533715+02 | .13059879+01 |
| .67195117-01 | .19870713+01 | .26525439-01 | .19868363+02 | .13370699+01 |
| .67631442-01 | .19870942+01 | .26246408-01 | .20219439+02 | .13695586+01 |
| .68067767-01 | .19871178+01 | .25965515-01 | .20588362+02 | .14035721+01 |
| .68504091-01 | .19871418+01 | .25682451-01 | .20976728+02 | .14392437+01 |
| .68940416-01 | .19871665+01 | .25396887-01 | .21386347+02 | .14767239+01 |
| .69376741-01 | .19871919+01 | .25108453-01 | .21819289+02 | .15161844+01 |
| .69813065-01 | .19872179+01 | .24816742-01 | .22277927+02 | .15578220+01 |
| .70249390-01 | .19872448+01 | .24521293-01 | .22765004+02 | .16018635+01 |
| .70685714-01 | .19872725+01 | .24221588-01 | .23283710+02 | .16485722+01 |
| .71122039-01 | .19873010+01 | .23917032-01 | .23837789+02 | .16982566+01 |
| .71558364-01 | .19873305+01 | .23606942-01 | .24431664+02 | .17512801+01 |
| .71994688-01 | .19873611+01 | .23290525-01 | .25070623+02 | .18080766+01 |
| .72431013-01 | .19873929+01 | .22966845-01 | .25761058+02 | .18691693+01 |
| .72867338-01 | .19874260+01 | .22634783-01 | .26510786+02 | .19351966+01 |
| .73303662-01 | .19874606+01 | .22292988-01 | .27329515+02 | .20069495+01 |
| .73717203-01 | .19874950+01 | .21958555-01 | .28180273+02 | .20811420+01 |

$$.17199375-01 = \Delta S/R$$

$$.22485569+01 = P_s/P_{\infty}$$

$$.16149169+01 = \rho_s/\rho_{\infty}$$

$$.13923669+01 = T_s/T_{\infty}$$

TABLE 31. CONICAL FLOWFIELD  $\theta_s = 2.5$  DEG;  $M_\infty = 20.0$

| $u_s$         | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|---------------|--------------|--------------|--------------|--------------|
| .99447256+001 | .19999924+02 | .43633230-01 | .68964807-01 |              |
| $\theta$      | $M^*_1$      | $\psi_1$     | $\pi$        | $r$          |
| .43633230-01  | .19889078+01 | .43633230-01 | .11451883+02 | .50000000+00 |
| .44069562-01  | .19889082+01 | .43201186-01 | .11534367+02 | .50864380+00 |
| .44505894-01  | .19889093+01 | .42777439-01 | .11618659+02 | .51744048+00 |
| .44942226-01  | .19889111+01 | .42361588-01 | .11704817+02 | .52639495+00 |
| .45378558-01  | .19889135+01 | .41953256-01 | .11792901+02 | .53551248+00 |
| .45814890-01  | .19889166+01 | .41552087-01 | .11882977+02 | .54479849+00 |
| .46251222-01  | .19889203+01 | .41157743-01 | .11975109+02 | .55425872+00 |
| .46687555-01  | .19889245+01 | .40769908-01 | .12069370+02 | .56389915+00 |
| .47123887-01  | .19889294+01 | .40388277-01 | .12165834+02 | .57372610+00 |
| .47560219-01  | .19889347+01 | .40012563-01 | .12264578+02 | .58374620+00 |
| .47996551-01  | .19889406+01 | .39642492-01 | .12365685+02 | .59396637+00 |
| .48432883-01  | .19889469+01 | .39277802-01 | .12469241+02 | .60439394+00 |
| .48869215-01  | .19889538+01 | .38918245-01 | .12575338+02 | .61503659+00 |
| .49305547-01  | .19889611+01 | .38563578-01 | .12684073+02 | .62590244+00 |
| .49741879-01  | .19889688+01 | .38213574-01 | .12795549+02 | .63700008+00 |
| .50178211-01  | .19889770+01 | .37868011-01 | .12909871+02 | .64833847+00 |
| .50614543-01  | .19889857+01 | .37526675-01 | .13027157+02 | .65992720+00 |
| .51050875-01  | .19889947+01 | .37189360-01 | .13147525+02 | .67177632+00 |
| .51487207-01  | .19890042+01 | .36855868-01 | .13271105+02 | .68389653+00 |
| .51923539-01  | .19890140+01 | .36526004-01 | .13398033+02 | .69629913+00 |
| .52359872-01  | .19890243+01 | .36199582-01 | .13528453+02 | .70899609+00 |
| .52796204-01  | .19890349+01 | .35876418-01 | .13662520+02 | .72200016+00 |
| .53232536-01  | .19890459+01 | .35556333-01 | .13800398+02 | .73532487+00 |
| .53668868-01  | .19890573+01 | .35239151-01 | .13942262+02 | .74898466+00 |
| .54105200-01  | .19890691+01 | .34924702-01 | .14088298+02 | .76299484+00 |
| .54541532-01  | .19890812+01 | .34612814-01 | .14238706+02 | .77737179+00 |
| .54977864-01  | .19890938+01 | .34303323-01 | .14393699+02 | .79213304+00 |
| .55414196-01  | .19891066+01 | .33996060-01 | .14553506+02 | .80729730+00 |
| .55850528-01  | .19891199+01 | .33690861-01 | .14718372+02 | .82288461+00 |
| .56286860-01  | .19891335+01 | .33387564-01 | .14888562+02 | .83891653+00 |
| .56723192-01  | .19891474+01 | .33086003-01 | .15064360+02 | .85541622+00 |
| .57159524-01  | .19891617+01 | .32786013-01 | .15246073+02 | .87240858+00 |
| .57595856-01  | .19891765+01 | .32487428-01 | .15434031+02 | .88992045+00 |
| .58032189-01  | .19891915+01 | .32190081-01 | .15628593+02 | .90798096+00 |
| .58468521-01  | .19892070+01 | .31893799-01 | .15830148+02 | .92662149+00 |
| .58904853-01  | .19892228+01 | .31598409-01 | .16039119+02 | .94587618+00 |
| .59341185-01  | .19892391+01 | .31303733-01 | .16255966+02 | .96578217+00 |
| .59777517-01  | .19892557+01 | .31009587-01 | .16481192+02 | .98637988+00 |
| .60213849-01  | .19892727+01 | .30715780-01 | .16715346+02 | .10077135+01 |
| .60650181-01  | .19892902+01 | .30422116-01 | .16959033+02 | .10298314+01 |



TABLE 31. (Concluded)

$$M_{\infty} = .19999924+02$$

$$\Theta_s = .43633230-01$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .61086513-01 | .19893081+01 | .30128388-01 | .17212916+02 | .10527869+01 |
| .61522838-01 | .19893266+01 | .29834378-01 | .17477727+02 | .10766380+01 |
| .61959162-01 | .19893456+01 | .29539861-01 | .17754284+02 | .11014504+01 |
| .62395487-01 | .19893650+01 | .29244591-01 | .18043488+02 | .11272955+01 |
| .62831812-01 | .19893850+01 | .28948310-01 | .18346347+02 | .11542535+01 |
| .63268136-01 | .19894054+01 | .28650739-01 | .18663987+02 | .11824137+01 |
| .63704461-01 | .19894264+01 | .28351579-01 | .18997673+02 | .12118763+01 |
| .64140785-01 | .19894481+01 | .28050505-01 | .19348835+02 | .12427541+01 |
| .64577110-01 | .19894703+01 | .27747159-01 | .19719093+02 | .12751751+01 |
| .65013435-01 | .19894931+01 | .27441148-01 | .20110295+02 | .13092845+01 |
| .65449759-01 | .19895166+01 | .27132038-01 | .20524567+02 | .13452494+01 |
| .65886084-01 | .19895409+01 | .26819339-01 | .20964360+02 | .13832617+01 |
| .66322409-01 | .19895660+01 | .26502501-01 | .21432525+02 | .14235445+01 |
| .66758733-01 | .19895919+01 | .26180898-01 | .21932403+02 | .14663585+01 |
| .67195058-01 | .19896187+01 | .25853807-01 | .22467950+02 | .15120115+01 |
| .67631382-01 | .19896466+01 | .25520393-01 | .23043890+02 | .15608706+01 |
| .68067707-01 | .19896756+01 | .25179671-01 | .23665926+02 | .16133778+01 |
| .68504032-01 | .19897059+01 | .24830468-01 | .24341042+02 | .16700727+01 |
| .68940356-01 | .19897376+01 | .24471365-01 | .25077898+02 | .17316234+01 |
| .68964807-01 | .19897394+01 | .24450915-01 | .25121233+02 | .17352328+01 |

$$.33330858-01 = \Delta S/R$$

$$.25816568+01 = P_s/P_{\infty}$$

$$.17431864+01 = \rho_s/\rho_{\infty}$$

$$.14807987+01 = T_s/T_{\infty}$$



TABLE 32. CONICAL FLOWFIELD  $\theta_s = 2.5 \text{ DEG}$ ;  $M_\infty = 22.5$

| $\frac{u}{u_s}$ | $\frac{M}{M_\infty}$ | $\frac{\theta}{\theta_s}$ | $\frac{\theta}{\theta_w}$ |              |  |
|-----------------|----------------------|---------------------------|---------------------------|--------------|--|
| .99534258+00    | .22499961+02         | .43633230-01              | .65509608-01              |              |  |
| $\theta$        | $M^*$                | $\psi_1$                  | $\kappa$                  | $\tau$       |  |
| .43633230-01    | .19906478+01         | .43633230-01              | .11451863+02              | .50000000+00 |  |
| .44069562-01    | .19906482+01         | .43201181-01              | .11541935+02              | .50897775+00 |  |
| .44505894-01    | .19906493+01         | .42777396-01              | .11634144+02              | .51813010+00 |  |
| .44942226-01    | .19906511+01         | .42361447-01              | .11728587+02              | .52746397+00 |  |
| .45378558-01    | .19906535+01         | .41952928-01              | .11825346+02              | .53698576+00 |  |
| .45814890-01    | .19906566+01         | .41551459-01              | .11924505+02              | .54670246+00 |  |
| .46251222-01    | .19906603+01         | .41156680-01              | .12026157+02              | .55662140+00 |  |
| .46687555-01    | .19906646+01         | .40768251-01              | .12130395+02              | .56675033+00 |  |
| .47123867-01    | .19906694+01         | .40385847-01              | .12237323+02              | .57709743+00 |  |
| .47560219-01    | .19906747+01         | .40009162-01              | .12347046+02              | .58767137+00 |  |
| .47996551-01    | .19906806+01         | .39637902-01              | .12459679+02              | .59848125+00 |  |
| .48432883-01    | .19906870+01         | .39271787-01              | .12575343+02              | .60953677+00 |  |
| .48869215-01    | .19906939+01         | .38910547-01              | .12694165+02              | .62084816+00 |  |
| .49305547-01    | .19907013+01         | .38553926-01              | .12816281+02              | .63242631+00 |  |
| .49741879-01    | .19907091+01         | .38201673-01              | .12941838+02              | .64428280+00 |  |
| .50178211-01    | .19907174+01         | .37853550-01              | .13070989+02              | .65642983+00 |  |
| .50614543-01    | .19907261+01         | .37509323-01              | .13203898+02              | .66888055+00 |  |
| .51050875-01    | .19907352+01         | .37168768-01              | .13340742+02              | .68164884+00 |  |
| .51487207-01    | .19907448+01         | .36831663-01              | .13481710+02              | .69474959+00 |  |
| .51923539-01    | .19907549+01         | .36497795-01              | .13627001+02              | .70819869+00 |  |
| .52359872-01    | .19907653+01         | .36166952-01              | .13776833+02              | .72201315+00 |  |
| .52796204-01    | .19907761+01         | .35838929-01              | .13931437+02              | .73621112+00 |  |
| .53232536-01    | .19907873+01         | .35513521-01              | .14091061+02              | .75081223+00 |  |
| .53668868-01    | .19907990+01         | .35190525-01              | .14255976+02              | .76583351+00 |  |
| .54105200-01    | .19908110+01         | .34869741-01              | .14426471+02              | .78130940+00 |  |
| .54541532-01    | .19908235+01         | .34550968-01              | .14602657+02              | .79725289+00 |  |
| .54977864-01    | .19908363+01         | .34234004-01              | .14785476+02              | .81369387+00 |  |
| .55414146-01    | .19908496+01         | .33918648-01              | .14974695+02              | .83066111+00 |  |
| .55850528-01    | .19908633+01         | .33604696-01              | .15170915+02              | .84818567+00 |  |
| .56286860-01    | .19908774+01         | .33291940-01              | .15374570+02              | .86630135+00 |  |
| .56723192-01    | .19908919+01         | .32980166-01              | .15586140+02              | .88504500+00 |  |
| .57159524-01    | .19909068+01         | .32669158-01              | .15806144+02              | .90445688+00 |  |
| .57595856-01    | .19909222+01         | .32358671-01              | .16035156+02              | .92458110+00 |  |
| .58032189-01    | .19909380+01         | .32048534-01              | .16273808+02              | .94546625+00 |  |
| .58468521-01    | .19909543+01         | .31738442-01              | .16522794+02              | .96716569+00 |  |
| .58904853-01    | .19909711+01         | .31428162-01              | .16782890+02              | .98973865+00 |  |
| .59341177-01    | .19909885+01         | .31117423-01              | .17054951+02              | .10132505+01 |  |
| .59777502-01    | .19910064+01         | .30805939-01              | .17339942+02              | .10377748+01 |  |
| .60213827-01    | .19910249+01         | .30493407-01              | .17636939+02              | .10633935+01 |  |
| .60650151-01    | .19910439+01         | .30179497-01              | .17953150+02              | .10901983+01 |  |
| .61086476-01    | .19910635+01         | .29863855-01              | .18283944+02              | .11182930+01 |  |
| .61522800-01    | .19910836+01         | .29546095-01              | .18632872+02              | .11477950+01 |  |
| .61959125-01    | .19911045+01         | .29225788-01              | .19001711+02              | .11788382+01 |  |
| .62395450-01    | .19911260+01         | .28902461-01              | .19392499+02              | .12115764+01 |  |
| .62831774-01    | .19911482+01         | .28575586-01              | .19807598+02              | .12461848+01 |  |
| .63268099-01    | .19911713+01         | .28244568-01              | .20249759+02              | .12828759+01 |  |
| .63704424-01    | .19911952+01         | .27908726-01              | .20722216+02              | .13218855+01 |  |
| .64140748-01    | .19912199+01         | .27567280-01              | .21225806+02              | .13635018+01 |  |
| .64577073-01    | .19912458+01         | .27219320-01              | .21774118+02              | .14080666+01 |  |
| .65013397-01    | .19912727+01         | .26864376-01              | .22363726+02              | .14559937+01 |  |
| .65449722-01    | .19913009+01         | .26499365-01              | .23004472+02              | .15077899+01 |  |
| .65886046-01    | .19913304+01         | .26124857-01              | .23696869+02              | .15623349+01 |  |

$$.56342745-01 = \Delta S/R$$

$$.29545439+01 = P_0/P_\infty$$

$$.18728586+01 = \rho_0/\rho_\infty$$

$$.15775451+01 = T_0/T_\infty$$

TABLE 33. CONICAL FLOWFIELD  $\theta_s = 2.5 \text{ DEG}$ ;  $M_\infty = 25.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .99597333+00 | .24999899+02 | .43633230+01 | .62917691-C1 |              |
| $\theta$     | $M^*_1$      | $\psi_1$     | $x$          | $r$          |
| .43633230+01 | .19919093+01 | .43633230+01 | .11451883+02 | .50000000+00 |
| .44047562+01 | .19919097+01 | .43201175+01 | .11548902+02 | .50928479+00 |
| .44505894+01 | .19919108+01 | .42777353+01 | .11648420+02 | .51876626+00 |
| .44942226+01 | .19919126+01 | .42361306+01 | .11750550+02 | .52845206+00 |
| .45378558+01 | .19919150+01 | .41952602+01 | .11855397+02 | .53835037+00 |
| .45814890+01 | .19919181+01 | .41550834+01 | .11963053+02 | .54846975+00 |
| .46251222+01 | .19919218+01 | .41155620+01 | .12073645+02 | .55881935+00 |
| .46687555+01 | .19919261+01 | .40766597+01 | .12187296+02 | .56940880+00 |
| .47123887+01 | .19919309+01 | .40383420+01 | .12304138+02 | .58024836+00 |
| .47560219+01 | .19919363+01 | .40005761+01 | .12424313+02 | .59134897+00 |
| .47996551+01 | .19919422+01 | .39633306+01 | .12547971+02 | .60272218+00 |
| .48432883+01 | .19919486+01 | .39265754+01 | .12675271+02 | .61438036+00 |
| .48869215+01 | .19919556+01 | .38902818+01 | .12806385+02 | .62633663+00 |
| .49305547+01 | .19919630+01 | .38544217+01 | .12941496+02 | .63860507+00 |
| .49741879+01 | .19919709+01 | .38189604+01 | .13080801+02 | .65120076+00 |
| .50178211+01 | .19919792+01 | .37838956+01 | .13224509+02 | .66413970+00 |
| .50614543+01 | .19919880+01 | .37491779+01 | .13372850+02 | .67743926+00 |
| .51050875+01 | .19919973+01 | .37147904+01 | .13526064+02 | .69111790+00 |
| .51487207+01 | .19920070+01 | .36807086+01 | .13684416+02 | .70519559+00 |
| .51923539+01 | .19920172+01 | .36469085+01 | .13848189+02 | .71969385+00 |
| .52359872+01 | .19920278+01 | .36133662+01 | .14017690+02 | .73463590+00 |
| .52796204+01 | .19920388+01 | .35800580+01 | .14193252+02 | .75004606+00 |
| .53232536+01 | .19920503+01 | .35469604+01 | .14375237+02 | .76595394+00 |
| .53668868+01 | .19920622+01 | .35140494+01 | .14564039+02 | .78238679+00 |
| .54105200+01 | .19920745+01 | .34813013+01 | .14760086+02 | .79937758+00 |
| .54541532+01 | .19920873+01 | .34486917+01 | .14963850+02 | .81696152+00 |
| .54977864+01 | .19921006+01 | .34161959+01 | .15175844+02 | .83517711+00 |
| .55414196+01 | .19921142+01 | .33837865+01 | .15396635+02 | .85406654+00 |
| .55850528+01 | .19921284+01 | .33514434+01 | .15626848+02 | .87367628+00 |
| .56286860+01 | .19921430+01 | .33191334+01 | .15867173+02 | .89405769+00 |
| .56723192+01 | .19921582+01 | .32868302+01 | .16118377+02 | .91524765+00 |
| .57159524+01 | .19921738+01 | .32545041+01 | .16381316+02 | .93736929+00 |
| .57595849+01 | .19921901+01 | .32221231+01 | .16656940+02 | .96043283+00 |
| .58032174+01 | .19922069+01 | .31896539+01 | .16946332+02 | .98453796+00 |
| .58468498+01 | .19922243+01 | .31570603+01 | .17250701+02 | .10097735+01 |
| .58904823+01 | .19922423+01 | .31243031+01 | .17571419+02 | .10362401+01 |
| .59341148+01 | .19922609+01 | .30913400+01 | .17910047+02 | .10640520+01 |
| .59777472+01 | .19922802+01 | .30581242+01 | .18268377+02 | .10933400+01 |
| .60213797+01 | .19923001+01 | .30246036+01 | .18648476+02 | .11242546+01 |
| .60650121+01 | .19923208+01 | .29907203+01 | .19052739+02 | .11569698+01 |
| .61086446+01 | .19923422+01 | .29564085+01 | .19483972+02 | .11916892+01 |
| .61522771+01 | .19923646+01 | .29221593+01 | .19945487+02 | .12286522+01 |
| .61959095+01 | .19923878+01 | .28881891+01 | .20441234+02 | .12681436+01 |
| .62395420+01 | .19924121+01 | .28550093+01 | .20975972+02 | .13105057+01 |
| .62831745+01 | .19924376+01 | .28131864+01 | .21555508+02 | .13561552+01 |
| .63268069+01 | .19924642+01 | .28058089+01 | .21675553+02 | .13655781+01 |

$$.86390302+01 = \Delta S/R$$

$$.33678814+01 = P_8/P_\infty$$

$$.20017036+01 = \rho_8/\rho_\infty$$

$$.14823076+01 = T_8/T_\infty$$

TABLE 34. CONICAL FLOWFIELD  $\theta_s = 2.5 \text{ DEG}$ ;  $M_\infty = 27.5$

| $\frac{u}{u_s}$ | $\frac{M}{M_\infty}$ | $\frac{\theta}{\theta_s}$ | $\frac{\theta}{\theta_w}$ |              |
|-----------------|----------------------|---------------------------|---------------------------|--------------|
| .99644524+00    | .27449944+02         | .43633230-01              | .60923570-01              |              |
| $\theta$        | $M^*$                | $\psi_1$                  | $x$                       | $r$          |
| .43633230-01    | .19928531+01         | .43633230-01              | .11451883+02              | .50000000+00 |
| .44069562-01    | .19928535+01         | .43201170-01              | .11555294+02              | .50956665+00 |
| .44505894-01    | .19928544+01         | .42777312-01              | .11661556+02              | .51935089+00 |
| .44942226-01    | .19928564+01         | .42361168-01              | .11770788+02              | .52936185+00 |
| .45378558-01    | .19928588+01         | .41952281-01              | .11883119+02              | .53960923+00 |
| .45814890-01    | .19928619+01         | .41560220-01              | .11998685+02              | .55010338+00 |
| .46251222-01    | .19928656+01         | .41154578-01              | .12117632+02              | .56085524+00 |
| .46687555-01    | .19928699+01         | .40764971-01              | .12240114+02              | .57167654+00 |
| .47123887-01    | .19928748+01         | .40381031-01              | .12366299+02              | .58317778+00 |
| .47560219-01    | .19928802+01         | .40002410-01              | .12496364+02              | .59477830+00 |
| .47996551-01    | .19928861+01         | .39628772-01              | .12630500+02              | .60668637+00 |
| .48432883-01    | .19928925+01         | .39259796-01              | .12768913+02              | .61891925+00 |
| .48869215-01    | .19928995+01         | .38895173-01              | .12911821+02              | .63149335+00 |
| .49305547-01    | .19929070+01         | .38534600-01              | .13059464+02              | .64442629+00 |
| .49741879-01    | .19929149+01         | .38177788-01              | .13212097+02              | .65773709+00 |
| .50178211-01    | .19929234+01         | .37824450-01              | .13369995+02              | .67144606+00 |
| .50614543-01    | .19929323+01         | .37474306-01              | .13533461+02              | .68557546+00 |
| .51050875-01    | .19929417+01         | .37127081-01              | .13702816+02              | .70014910+00 |
| .51487207-01    | .19929515+01         | .36782503-01              | .13878416+02              | .71519295+00 |
| .51923539-01    | .19929618+01         | .36440298-01              | .14060644+02              | .73073521+00 |
| .52359872-01    | .19929726+01         | .36100196-01              | .14249920+02              | .74680658+00 |
| .52796204-01    | .19929838+01         | .35761924-01              | .14446704+02              | .76344058+00 |
| .53232536-01    | .19929955+01         | .35425204-01              | .14651500+02              | .78067400+00 |
| .53668868-01    | .19930077+01         | .35089754-01              | .14864863+02              | .79854722+00 |
| .54105200-01    | .19930203+01         | .34755287-01              | .15087406+02              | .81710460+00 |
| .54541532-01    | .19930335+01         | .34421504-01              | .15319807+02              | .83639526+00 |
| .54977864-01    | .19930471+01         | .34088097-01              | .15562820+02              | .85647365+00 |
| .55414196-01    | .19930612+01         | .33754741-01              | .15817283+02              | .87740026+00 |
| .55850521-01    | .19930761+01         | .33421093-01              | .16084135+02              | .89924248+00 |
| .56286845-01    | .19930915+01         | .33086793-01              | .16364442+02              | .92207677+00 |
| .56723170-01    | .19931075+01         | .32751455-01              | .16659398+02              | .94598863+00 |
| .57159495-01    | .19931240+01         | .32414658-01              | .16970358+02              | .97107486+00 |
| .57595819-01    | .19931411+01         | .32075953-01              | .17298869+02              | .99744567+00 |
| .58032144-01    | .19931589+01         | .31734840-01              | .17646705+02              | .10252272+01 |
| .58468468-01    | .19931774+01         | .31390766-01              | .18015917+02              | .10545650+01 |
| .58904793-01    | .19931967+01         | .31043116-01              | .18408093+02              | .10856279+01 |
| .59341118-01    | .19932167+01         | .30691193-01              | .18828430+02              | .11186134+01 |
| .59777442-01    | .19932375+01         | .30334201-01              | .19277840+02              | .11537545+01 |
| .60213747-01    | .19932593+01         | .29971219-01              | .19761081+02              | .11913293+01 |
| .60650092-01    | .19932821+01         | .29601166-01              | .20282944+02              | .12316730+01 |
| .60923570-01    | .19932970+01         | .29365061-01              | .20632316+02              | .12585518+01 |

$$.12324093+00 = \Delta S/R$$

$$.38223886+01 = P_s/P_\infty$$

$$.21280613+01 = \rho_s/\rho_\infty$$

$$.17961835+01 = T_s/T_\infty$$

|                   |                        |                   |                        |
|-------------------|------------------------|-------------------|------------------------|
| $\underline{u}_s$ | $\underline{M}_\infty$ | $\underline{e}_s$ | $\underline{\Theta}_w$ |
| .99680780+00      | .29999956+02           | .43633230-01      | .59357017-01           |

|                      |                     |                      |                 |                 |
|----------------------|---------------------|----------------------|-----------------|-----------------|
| $\underline{\Theta}$ | $\underline{M}_1^*$ | $\underline{\psi}_1$ | $\underline{x}$ | $\underline{r}$ |
| .43633230-01         | .19935782+01        | .43633230-01         | .11451883+02    | .50000000+00    |
| .44069562-01         | .19935786+01        | .43201165-01         | .11561147+02    | .50982475+00    |
| .44505894-01         | .19935797+01        | .42777271-01         | .11673596+02    | .51988710+00    |
| .44942226-01         | .19935815+01        | .42361034-01         | .11789373+02    | .53019767+00    |
| .45378558-01         | .19935839+01        | .41951970-01         | .11908633+02    | .54076782+00    |
| .45814890-01         | .19935870+01        | .41549624-01         | .12031539+02    | .55160962+00    |
| .46251222-01         | .19935907+01        | .41153566-01         | .12158267+02    | .56273602+00    |
| .46687555-01         | .19935950+01        | .40763390-01         | .12289006+02    | .57416084+00    |
| .47123887-01         | .19935999+01        | .40378707-01         | .12423959+02    | .58589896+00    |
| .47560219-01         | .19936053+01        | .39999146-01         | .12563344+02    | .59796629+00    |
| .47996551-01         | .19936113+01        | .39624351-01         | .12707396+02    | .61037996+00    |
| .48432883-01         | .19936178+01        | .39253979-01         | .12856371+02    | .62315841+00    |
| .48869215-01         | .19936248+01        | .38887698-01         | .13010541+02    | .63632153+00    |
| .49305547-01         | .19936323+01        | .38525183-01         | .13170205+02    | .64989085+00    |
| .49741879-01         | .19936403+01        | .38166120-01         | .13335686+02    | .66388972+00    |
| .50178211-01         | .19936488+01        | .37810196-01         | .13507336+02    | .67834334+00    |
| .50614543-01         | .19936578+01        | .37457103-01         | .13685538+02    | .69327938+00    |
| .51050875-01         | .19936672+01        | .37106538-01         | .13870711+02    | .70872773+00    |
| .51487207-01         | .19936772+01        | .36758194-01         | .14063314+02    | .72472127+00    |
| .51923539-01         | .19936877+01        | .36411764-01         | .14263852+02    | .74129599+00    |
| .52359872-01         | .19936986+01        | .36066938-01         | .14472880+02    | .75849138+00    |
| .52796204-01         | .19937101+01        | .35723398-01         | .14691011+02    | .77635106+00    |
| .53232536-01         | .19937220+01        | .35380818-01         | .14918926+02    | .79492326+00    |
| .53668868-01         | .19937344+01        | .35038864-01         | .15157384+02    | .81426154+00    |
| .54105200-01         | .19937474+01        | .34697185-01         | .15407228+02    | .83442549+00    |
| .54541532-01         | .19937609+01        | .34355413-01         | .15669406+02    | .85548183+00    |
| .54977857-01         | .19937751+01        | .34013156-01         | .15944984+02    | .87750531+00    |
| .55414181-01         | .19937899+01        | .33669999-01         | .16235178+02    | .90058109+00    |
| .55850506-01         | .19938053+01        | .33325496-01         | .16541362+02    | .92480516+00    |
| .56286830-01         | .19938213+01        | .32979160-01         | .16865107+02    | .95028716+00    |
| .56723155-01         | .19938380+01        | .32630457-01         | .17208221+02    | .97715276+00    |
| .57159480-01         | .19938554+01        | .32278799-01         | .17572799+02    | .10055474+01    |
| .57595804-01         | .19938735+01        | .31923524-01         | .17961287+02    | .10356402+01    |
| .58032129-01         | .19938923+01        | .31563883-01         | .18376558+02    | .10676295+01    |
| .58468454-01         | .19939121+01        | .31199022-01         | .18822034+02    | .11017509+01    |
| .58904778-01         | .19939327+01        | .30827947-01         | .19301813+02    | .11382858+01    |
| .59341103-01         | .19939544+01        | .30449492-01         | .19820884+02    | .11775757+01    |
| .59357017-01         | .19939552+01        | .30435532-01         | .19840636+02    | .11790660+01    |

$$.16639672+00 = \Delta S/R$$

$$.43176202+01 = P_s/P_\infty$$

$$.22502569+01 = \rho_s/\rho_\infty$$

$$.19187233+01 = T_s/T_\infty$$

TABLE 36. CONICAL FLOWFIELD  $\theta_s = 5.0$  DEG;  $M_\infty = 1.0423414$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .50000938+00 | .10423414+01 | .87266460-01 | .12918606+01 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .87266460-01 | .10000000+01 | .87266460-01 | .57150261+01 | .50000000+00 |
| .12042770+00 | .10006467+01 | .63208309-01 | .57052359+01 | .69040927+00 |
| .15358894+00 | .10017391+01 | .49489463-01 | .57052069+01 | .88321245+00 |
| .18675017+00 | .10028503+01 | .40602088-01 | .57117385+01 | .10792438+01 |
| .21991141+00 | .10038931+01 | .34361783-01 | .57232388+01 | .12792950+01 |
| .25307265+00 | .10048546+01 | .29728852-01 | .57388307+01 | .14841620+01 |
| .28623389+00 | .10057407+01 | .26145086-01 | .57580075+01 | .16946730+01 |
| .31939512+00 | .10065611+01 | .23284014-01 | .57804872+01 | .19117125+01 |
| .34906571+00 | .10072476+01 | .21168239-01 | .58032887+01 | .21122234+01 |
| .37873629+00 | .10078956+01 | .19369524-01 | .58286044+01 | .23194823+01 |
| .40840687+00 | .10085107+01 | .17818611-01 | .58564694+01 | .25343193+01 |
| .43807745+00 | .10090976+01 | .16465157-01 | .58869652+01 | .27576546+01 |
| .46774803+00 | .10096605+01 | .15271399-01 | .59202223+01 | .29905179+01 |
| .49741861+00 | .10102028+01 | .14208645-01 | .59564183+01 | .32340695+01 |
| .52708896+00 | .10107276+01 | .13254382-01 | .59957776+01 | .34896220+01 |
| .55326866+00 | .10111783+01 | .12488663-01 | .60333555+01 | .37262703+01 |
| .57944836+00 | .10116194+01 | .11764099-01 | .60738453+01 | .39746047+01 |
| .60562807+00 | .10120522+01 | .11132613-01 | .61175188+01 | .42359601+01 |
| .63180777+00 | .10124785+01 | .10527529-01 | .61646991+01 | .45118642+01 |
| .65798747+00 | .10128994+01 | .99630605-02 | .62157645+01 | .48040721+01 |
| .68416717+00 | .10133163+01 | .94343722-02 | .62711620+01 | .51146150+01 |
| .71034687+00 | .10137304+01 | .89373589-02 | .63314212+01 | .54458577+01 |
| .73303594+00 | .10140881+01 | .85294396-02 | .63880621+01 | .57518098+01 |
| .75572502+00 | .10144454+01 | .81405491-02 | .64493076+01 | .60774890+01 |
| .77841409+00 | .10148032+01 | .77688918-02 | .65157239+01 | .64253410+01 |
| .80110317+00 | .10151623+01 | .74128136-02 | .65879786+01 | .67982262+01 |
| .82379224+00 | .10155236+01 | .70708990-02 | .66668635+01 | .71995119+01 |
| .84648132+00 | .10158879+01 | .67417473-02 | .67533246+01 | .76331930+01 |
| .86917039+00 | .10162562+01 | .64241439-02 | .68485020+01 | .81040488+01 |
| .88836884+00 | .10165717+01 | .61635897-02 | .69368622+01 | .85357416+01 |
| .90756729+00 | .10168914+01 | .59098825-02 | .70334573+01 | .90023420+01 |
| .92676573+00 | .10172161+01 | .56624338-02 | .71394984+01 | .95088377+01 |
| .94596418+00 | .10175466+01 | .54206476-02 | .72564446+01 | .10061218+02 |
| .96516263+00 | .10178837+01 | .51839575-02 | .73860776+01 | .10666749+02 |
| .98436107+00 | .10182283+01 | .49518421-02 | .75305907+01 | .11334336+02 |
| .10035595+01 | .10185816+01 | .47236681-02 | .76927159+01 | .12075015+02 |
| .10192670+01 | .10188780+01 | .45394003-02 | .78408448+01 | .12744961+02 |
| .10349746+01 | .10191818+01 | .43571293-02 | .80054140+01 | .13482479+02 |
| .10506821+01 | .10194938+01 | .41765720-02 | .81893405+01 | .14299192+02 |
| .10663897+01 | .10198153+01 | .39973557-02 | .83962943+01 | .15209609+02 |

TABLE 36. (Concluded)

| $M_{\infty} = .10423414+01$ |                     |                      | $\Theta_s = .87266460-01$ |                 |
|-----------------------------|---------------------|----------------------|---------------------------|-----------------|
| $\underline{\Theta}$        | $\underline{M^*_1}$ | $\underline{\psi_1}$ | $\underline{x}$           | $\underline{r}$ |
| .10820972+01                | .10201471+01        | .38190931-02         | .86308948+01              | .16232081+02    |
| .10978048+01                | .10204909+01        | .36413819-02         | .88991780+01              | .17390204+02    |
| .11135123+01                | .10208482+01        | .34638047-02         | .92090303+01              | .18714855+02    |
| .11257293+01                | .10211368+01        | .33254176-02         | .94854273+01              | .19886199+02    |
| .11379463+01                | .10214360+01        | .31864792-02         | .97998836+01              | .21208424+02    |
| .11501633+01                | .10217470+01        | .30466318-02         | .10160968+02              | .22714599+02    |
| .11623803+01                | .10220716+01        | .29054880-02         | .10580078+02              | .24448511+02    |
| .11745972+01                | .10224118+01        | .27625263-02         | .11072709+02              | .26469468+02    |
| .11868142+01                | .10227702+01        | .26170909-02         | .11660546+02              | .28860061+02    |
| .11990312+01                | .10231499+01        | .24684072-02         | .12374928+02              | .31739113+02    |
| .12077576+01                | .10234366+01        | .23596287-02         | .12987899+02              | .34189835+02    |
| .12164841+01                | .10237384+01        | .22481233-02         | .13713932+02              | .37072387+02    |
| .12252105+01                | .10240580+01        | .21332502-02         | .14588716+02              | .40520362+02    |
| .12339369+01                | .10243990+01        | .20140707-02         | .15665288+02              | .44731478+02    |
| .12426633+01                | .10247662+01        | .18893927-02         | .17026347+02              | .50012743+02    |
| .12513897+01                | .10251665+01        | .17573833-02         | .18809250+02              | .56871752+02    |
| .12601161+01                | .10256107+01        | .16152710-02         | .21262407+02              | .66222008+02    |
| .12653520+01                | .10259053+01        | .15232861-02         | .23246977+02              | .73726981+02    |
| .12705878+01                | .10262284+01        | .14242977-02         | .25846611+02              | .83493405+02    |
| .12758237+01                | .10265900+01        | .13156384-02         | .29435528+02              | .96879554+02    |
| .12810585+01                | .10270072+01        | .11921623-02         | .34805513+02              | .11674715+03    |
| .12862933+01                | .10275199+01        | .10436177-02         | .44082123+02              | .15074104+03    |
| .12915280+01                | .10282606+01        | .83373487-03         | .66997240+02              | .23363337+03    |
| .12918606+01                | .10283264+01        | .81525743-03         | .69927181+02              | .24415706+03    |

$$.36263373-07 = \Delta S/R$$

$$.10549268+01 = P_s/P_{\infty}$$

$$.10326024+01 = \rho_s/\rho_{\infty}$$

$$.10216196+01 = T_s/T_{\infty}$$



TABLE 37. CONICAL FLOWFIELD  $\theta_s = 5.0$  DEG;  $M_\infty = 1.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .64180595+00 | .14999996+01 | .87266460-01 | .73101837+00 |              |
| $\theta$     | $M^*_1$      | $\psi_1$     | $x$          | $r$          |
| .87266460-01 | .12835878+01 | .87266460-01 | .57150261+01 | .50000000+00 |
| .10559241+00 | .12839029+01 | .72106095-01 | .58196597+01 | .61680597+00 |
| .12391835+00 | .12845577+01 | .61390738-01 | .59319773+01 | .73886667+00 |
| .14224430+00 | .12853330+01 | .53394539-01 | .60520493+01 | .86672301+00 |
| .16057025+00 | .12861405+01 | .47184423-01 | .61801676+01 | .10009685+01 |
| .17889620+00 | .12869430+01 | .42211048-01 | .63167962+01 | .11422625+01 |
| .19722214+00 | .12877246+01 | .38129574-01 | .64625496+01 | .12913444+01 |
| .21380276+00 | .12884085+01 | .35014004-01 | .66029149+01 | .14336329+01 |
| .23038338+00 | .12890691+01 | .32324109-01 | .67520399+01 | .15836761+01 |
| .24696400+00 | .12897069+01 | .29974055-01 | .69107053+01 | .17422612+01 |
| .26354462+00 | .12903229+01 | .27899511-01 | .70798188+01 | .19102810+01 |
| .28012524+00 | .12909189+01 | .26051242-01 | .72604282+01 | .20887520+01 |
| .29670586+00 | .12914964+01 | .24391036-01 | .74537486+01 | .22788387+01 |
| .31154115+00 | .12919991+01 | .23040146-01 | .76386444+01 | .24598545+01 |
| .32637644+00 | .12924896+01 | .21797970-01 | .78360104+01 | .26523420+01 |
| .34121173+00 | .12929693+01 | .20650033-01 | .80471905+01 | .28575639+01 |
| .35604702+00 | .12934393+01 | .19584142-01 | .82737354+01 | .30769732+01 |
| .37088231+00 | .12939007+01 | .18590055-01 | .85174479+01 | .33122528+01 |
| .38571760+00 | .12943546+01 | .17659031-01 | .87804320+01 | .35653620+01 |
| .39880756+00 | .12947498+01 | .16883913-01 | .90304393+01 | .38053217+01 |
| .41189753+00 | .12951407+01 | .16147524-01 | .92993470+01 | .40627828+01 |
| .42498749+00 | .12955279+01 | .15445959-01 | .95894659+01 | .43398861+01 |
| .43807745+00 | .12959123+01 | .14775585-01 | .99034996+01 | .46391358+01 |
| .45116741+00 | .12962945+01 | .14133226-01 | .10244643+02 | .49634855+01 |
| .46425737+00 | .12966752+01 | .13515983-01 | .10616689+02 | .53164390+01 |
| .47560201+00 | .12970047+01 | .12999300-01 | .10997616+02 | .56486902+01 |
| .48694664+00 | .12973341+01 | .12497876-01 | .11348674+02 | .60088102+01 |
| .49829128+00 | .12976639+01 | .12010250-01 | .11764042+02 | .64006488+01 |
| .50963583+00 | .12979949+01 | .11534899-01 | .12218711+02 | .68288017+01 |
| .52098037+00 | .12983275+01 | .11070520-01 | .12718708+02 | .72988125+01 |
| .53232490+00 | .12986624+01 | .10615811-01 | .13271362+02 | .78174204+01 |
| .54192413+00 | .12989481+01 | .10237686-01 | .13786745+02 | .83002841+01 |
| .55152335+00 | .12992365+01 | .98647624-02 | .14352915+02 | .88299581+01 |
| .56112257+00 | .12995280+01 | .94962046-02 | .14977962+02 | .94138651+01 |
| .57072180+00 | .12998233+01 | .91312975-02 | .15671808+02 | .10041103+02 |
| .58032102+00 | .13001229+01 | .87691098-02 | .16446762+02 | .10782947+02 |
| .58992025+00 | .13004277+01 | .84087700-02 | .17318282+02 | .11593553+02 |
| .59777416+00 | .13006814+01 | .81146434-02 | .18116767+02 | .12335236+02 |
| .60562807+00 | .13009396+01 | .78205168-02 | .19006562+02 | .13160734+02 |
| .61346190+00 | .13012033+01 | .75257793-02 | .20004853+02 | .14085544+02 |

TABLE 37. (Concluded)

$$M_{\infty} = .14999996+01$$

$$\Theta_s = .87266460-01$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .62133589+00 | .13014727+01 | .72296709-02 | .21132566+02 | .15129389+02 |
| .62918980+00 | .13017489+01 | .69314167-02 | .22418007+02 | .16317496+02 |
| .63704371+00 | .13020329+01 | .66300854-02 | .23897270+02 | .17682996+02 |
| .64315230+00 | .13022598+01 | .63928664-02 | .25212303+02 | .18895490+02 |
| .64926090+00 | .13024929+01 | .61525255-02 | .26703563+02 | .20269040+02 |
| .65536950+00 | .13027330+01 | .59063328-02 | .28409914+02 | .21839035+02 |
| .66147809+00 | .13029809+01 | .56594685-02 | .30382728+02 | .23652226+02 |
| .66758669+00 | .13032379+01 | .54048598-02 | .32691450+02 | .25771768+02 |
| .67369529+00 | .13035055+01 | .51432848-02 | .35432372+02 | .28285186+02 |
| .67805857+00 | .13037842+01 | .49512982-02 | .37728782+02 | .30388851+02 |
| .68242186+00 | .13039101+01 | .47542006-02 | .40383982+02 | .32819045+02 |
| .68678514+00 | .13041243+01 | .45511499-02 | .43491931+02 | .35660936+02 |
| .69114842+00 | .13043480+01 | .43409765-02 | .47182813+02 | .39032861+02 |
| .69551171+00 | .13045831+01 | .41223094-02 | .51644090+02 | .43104466+02 |
| .69987499+00 | .13048317+01 | .38931966-02 | .57154587+02 | .48128431+02 |
| .70249296+00 | .13049886+01 | .37497506-02 | .61136274+02 | .51755459+02 |
| .70511093+00 | .13051523+01 | .36009178-02 | .65784412+02 | .55986685+02 |
| .70772880+00 | .13053238+01 | .34458041-02 | .71288639+02 | .60993648+02 |
| .71034619+00 | .13055046+01 | .32832772-02 | .77919532+02 | .67020988+02 |
| .71296358+00 | .13056965+01 | .31118095-02 | .86082324+02 | .74434944+02 |
| .71558097+00 | .13059020+01 | .29292628-02 | .96408251+02 | .83805732+02 |
| .71819836+00 | .13061246+01 | .27326345-02 | .10994671+03 | .96080822+02 |
| .72081575+00 | .13063699+01 | .25172457-02 | .12859527+03 | .11297251+03 |
| .72343314+00 | .13066470+01 | .22753179-02 | .15622248+03 | .13796950+03 |
| .72605053+00 | .13069737+01 | .19918457-02 | .20235044+03 | .17965280+03 |
| .72866791+00 | .13073946+01 | .16288906-02 | .30037175+03 | .26808823+03 |
| .73101837+00 | .13080425+01 | .10738298-02 | .68577885+03 | .61497434+03 |

$$.11234079-07 = \Delta S/R$$

$$.10745277+01 = P_s/P_{\infty}$$

$$.10440714+01 = \rho_s/\rho_{\infty}$$

$$.10291707+01 = T_s/T_{\infty}$$



TABLE 38. CONICAL FLOWFIELD  $\theta_s = 5.0$  DEG;  $M_\infty = 2.0$ 

| $\underline{u_s}$    | $\underline{M_\infty}$ | $\underline{\theta_s}$ | $\underline{\theta_w}$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .74338059+00         | .19999981+01           | .87266460-01           | .52560388+00           |                 |
| $\underline{\theta}$ | $\underline{M_1^*}$    | $\underline{\psi_1}$   | $\underline{x}$        | $\underline{r}$ |
| .87266460-01         | .14867333+01           | .87266460-01           | .57150261+01           | .50000000+00    |
| .10122909+00         | .14869604+01           | .75217399-01           | .58442458+01           | .59363677+00    |
| .11519171+00         | .14874692+01           | .66050500-01           | .59835918+01           | .69232507+00    |
| .12915434+00         | .14881102+01           | .58818432-01           | .61335826+01           | .79661311+00    |
| .14311697+00         | .14888110+01           | .52949805-01           | .62949527+01           | .90711631+00    |
| .15707959+00         | .14895345+01           | .48078740-01           | .64686407+01           | .10245318+01    |
| .16973322+00         | .14901934+01           | .44318946-01           | .66376420+01           | .11375736+01    |
| .18238686+00         | .14908473+01           | .41046906-01           | .68187202+01           | .12576208+01    |
| .19504048+00         | .14914921+01           | .38167136-01           | .70130687+01           | .13854448+01    |
| .20769411+00         | .14921257+01           | .35607373-01           | .72220852+01           | .15219315+01    |
| .22034774+00         | .14927474+01           | .33311900-01           | .74474033+01           | .16681035+01    |
| .23169238+00         | .14932946+01           | .31442463-01           | .76648414+01           | .18083601+01    |
| .24303701+00         | .14938328+01           | .29724807-01           | .78985327+01           | .19583463+01    |
| .25438165+00         | .14943624+01           | .28138068-01           | .81503540+01           | .21192102+01    |
| .26572628+00         | .14948842+01           | .26664719-01           | .84224948+01           | .22922870+01    |
| .27707091+00         | .14953991+01           | .25290150-01           | .87175288+01           | .24791405+01    |
| .28710655+00         | .14958494+01           | .24146445-01           | .90000324+01           | .26573890+01    |
| .29714219+00         | .14962956+01           | .23062777-01           | .93053049+01           | .28493563+01    |
| .30717783+00         | .14967384+01           | .22032559-01           | .96362588+01           | .30568000+01    |
| .31721346+00         | .14971785+01           | .21049935-01           | .99963369+01           | .32817944+01    |
| .32724910+00         | .14976167+01           | .20109732-01           | .10389635+02           | .35268042+01    |
| .33597574+00         | .14979968+01           | .19322921-01           | .10762436+02           | .37584092+01    |
| .34470239+00         | .14983766+01           | .18561777-01           | .11167919+02           | .40096908+01    |
| .35342903+00         | .14987567+01           | .17823633-01           | .11610679+02           | .42834035+01    |
| .36215567+00         | .14991378+01           | .17106026-01           | .12096222+02           | .45828463+01    |
| .37088231+00         | .14995204+01           | .16406599-01           | .12631213+02           | .49120079+01    |
| .37829996+00         | .14998475+01           | .15824661-01           | .13130872+02           | .52187704+01    |
| .38571760+00         | .15001769+01           | .15252840-01           | .13678184+02           | .55541319+01    |
| .39313525+00         | .15005091+01           | .14689773-01           | .14280475+02           | .59224650+01    |
| .40055289+00         | .15008446+01           | .14134068-01           | .14946684+02           | .63291000+01    |
| .40797054+00         | .15011843+01           | .13584357-01           | .15687824+02           | .67805987+01    |
| .41407919+00         | .15014677+01           | .13135117-01           | .16364037+02           | .71918241+01    |
| .42018783+00         | .15017550+01           | .12688115-01           | .17109784+02           | .76446148+01    |
| .42629648+00         | .15020466+01           | .12242422-01           | .17936662+02           | .81458654+01    |
| .43240513+00         | .15023433+01           | .11797085-01           | .18859037+02           | .87041104+01    |
| .43851378+00         | .15026459+01           | .11350997-01           | .19874950+02           | .93300586+01    |
| .44331343+00         | .15028803+01           | .10999203+01           | .20880327+02           | .98781139+01    |
| .44811309+00         | .15031353+01           | .10645553-01           | .21880967+02           | .10484563+02    |
| .45291274+00         | .15033875+01           | .10289364-01           | .22931429+02           | .11159636+02    |
| .45771239+00         | .15036456+01           | .99297725-02           | .24190196+02           | .11916159+02    |

TABLE 38. (Concluded)

$$M_{\infty} = .19999981+01$$

$$\Theta_s = .87266460-01$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .46251205+00 | .15039103+01 | .95658302-02 | .25613518+02 | .12770422+02 |
| .46600270+00 | .15041075+01 | .92977770-02 | .26771961+02 | .13464887+02 |
| .46949336+00 | .15043092+01 | .90263486-02 | .28053319+02 | .14232253+02 |
| .47298402+00 | .15045157+01 | .87509602-02 | .29478894+02 | .15085104+02 |
| .47647467+00 | .15047277+01 | .84709972-02 | .31075369+02 | .16039185+02 |
| .47996533+00 | .15049458+01 | .81856586-02 | .32876545+02 | .17114437+02 |
| .48214699+00 | .15050856+01 | .80041923-02 | .34125098+02 | .17859124+02 |
| .48432865+00 | .15052283+01 | .78200549-02 | .35483517+02 | .18668772+02 |
| .48651031+00 | .15053742+01 | .76329224-02 | .36967542+02 | .19552648+02 |
| .48869197+00 | .15055235+01 | .74424408-02 | .38596098+02 | .20521898+02 |
| .49087363+00 | .15056767+01 | .72482899-02 | .40392238+02 | .21590089+02 |
| .49305529+00 | .15058340+01 | .70499927-02 | .42384304+02 | .22773896+02 |
| .49523691+00 | .15059965+01 | .68475679-02 | .44607551+02 | .24094049+02 |
| .49741854+00 | .15061642+01 | .66395904-02 | .47106574+02 | .25576764+02 |
| .49960016+00 | .15063377+01 | .64262338-02 | .49938544+02 | .27255630+02 |
| .50178140+00 | .15065178+01 | .62053502-02 | .53177518+02 | .29174133+02 |
| .50396256+00 | .15067054+01 | .59765577-02 | .56923350+02 | .31390885+02 |
| .50614372+00 | .15069016+01 | .57385117-02 | .61312186+02 | .33985758+02 |
| .50832488+00 | .15071080+01 | .54895356-02 | .66535500+02 | .37071020+02 |
| .51050603+00 | .15073265+01 | .52274391-02 | .72872656+02 | .40810382+02 |
| .51268719+00 | .15075599+01 | .49490854-02 | .80749769+02 | .45453399+02 |
| .51486835+00 | .15078121+01 | .46501756-02 | .90855040+02 | .51402854+02 |
| .51704951+00 | .15080888+01 | .43240786-02 | .10438769+03 | .59360128+02 |
| .51923066+00 | .15083995+01 | .39599091-02 | .12367404+03 | .70684752+02 |
| .52141182+00 | .15087623+01 | .35372898-02 | .15403280+03 | .88482294+02 |
| .52359298+00 | .15092198+01 | .30077249-02 | .21179950+03 | .12228086+03 |
| .52560388+00 | .15098783+01 | .22502169-02 | .37642937+03 | .21833913+03 |

$$.57159923-07 = \Delta S/R$$

$$.11134598+01 = P_s/P_{\infty}$$

$$.10666063+01 = \rho_s/\rho_{\infty}$$

$$.10439276+01 = T_s/T_{\infty}$$

TABLE 39. CONICAL FLOWFIELD  $\theta_s = 5.0$  DEG;  $M_\infty = 2.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .80985614+00 | .24999925+01 | .87266460-01 | .41481444+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .87266460-01 | .16196819+01 | .87266460-01 | .57150261+01 | .50000000+00 |
| .97302098-01 | .16198184+01 | .78258143-01 | .58388887+01 | .56993590+00 |
| .10733774+00 | .16201471+01 | .70906622-01 | .59716752+01 | .64345916+00 |
| .11737337+00 | .16205884+01 | .64774835-01 | .61139362+01 | .72092696+00 |
| .12740901+00 | .16210963+01 | .59568202-01 | .62663593+01 | .80273896+00 |
| .13744465+00 | .16216431+01 | .55080445-01 | .64297748+01 | .88934541+00 |
| .14660762+00 | .16221618+01 | .51483620-01 | .65894110+01 | .97303929+00 |
| .15577060+00 | .16226905+01 | .48276415-01 | .67599026+01 | .10615943+01 |
| .16493357+00 | .16232238+01 | .45392884-01 | .69422600+01 | .11555085+01 |
| .17409654+00 | .16237583+01 | .42781031-01 | .71376499+01 | .12553489+01 |
| .18325952+00 | .16242918+01 | .40399252-01 | .73474227+01 | .13617638+01 |
| .19154983+00 | .16247725+01 | .38414285-01 | .75509135+01 | .14643295+01 |
| .19984014+00 | .16252509+01 | .36569299-01 | .77688001+01 | .15735208+01 |
| .20813045+00 | .16257265+01 | .34846861-01 | .80026273+01 | .16900647+01 |
| .21642075+00 | .16261995+01 | .33232134-01 | .82541826+01 | .18147991+01 |
| .22471106+00 | .16266701+01 | .31712301-01 | .85255469+01 | .19486955+01 |
| .23212871+00 | .16270893+01 | .30423872-01 | .87871178+01 | .20771859+01 |
| .23954635+00 | .16275071+01 | .29195644-01 | .90685195+01 | .22148584+01 |
| .24696400+00 | .16279238+01 | .28021425-01 | .93721156+01 | .23628085+01 |
| .25438165+00 | .16283400+01 | .26895657-01 | .97006701+01 | .25223149+01 |
| .26179929+00 | .16287561+01 | .25813259-01 | .10057439+02 | .26948816+01 |
| .26834427+00 | .16291235+01 | .24890579-01 | .10398730+02 | .28594053+01 |
| .27488925+00 | .16294917+01 | .23995180-01 | .10768117+02 | .30369220+01 |
| .28143423+00 | .16298611+01 | .23124311-01 | .11169293+02 | .32291297+01 |
| .28797922+00 | .16302323+01 | .22275358-01 | .11606642+02 | .34380427+01 |
| .29452420+00 | .16306059+01 | .21445870-01 | .12085413+02 | .36660683+01 |
| .30019651+00 | .16309319+01 | .20740841-01 | .12538712+02 | .38813781+01 |
| .30586883+00 | .16312606+01 | .20047024-01 | .13032812+02 | .41154808+01 |
| .31154115+00 | .16315926+01 | .19362956-01 | .13573638+02 | .43710864+01 |
| .31721346+00 | .16319283+01 | .18686999-01 | .14168349+02 | .46514646+01 |
| .32288578+00 | .16322684+01 | .18017575-01 | .14825672+02 | .49605982+01 |
| .32768543+00 | .16325601+01 | .17455027-01 | .15438678+02 | .52482364+01 |
| .33248509+00 | .16328561+01 | .16894929-01 | .16112156+02 | .55635902+01 |
| .33728474+00 | .16331568+01 | .16336109-01 | .16855829+02 | .59110825+01 |
| .34208439+00 | .16334630+01 | .15777387-01 | .17681672+02 | .62961574+01 |
| .34688405+00 | .16337754+01 | .15217375-01 | .18604611+02 | .67255920+01 |
| .35081103+00 | .16340363+01 | .14757190-01 | .19444990+02 | .71158525+01 |
| .35473802+00 | .16343025+01 | .14294203-01 | .20375818+02 | .75473492+01 |
| .35866501+00 | .16345747+01 | .13827402-01 | .21413130+02 | .80273433+01 |
| .36259200+00 | .16348538+01 | .13355572-01 | .22577098+02 | .85649567+01 |

TABLE 39. (Concluded)

$$M_{\infty} = .24999925+01$$

$$\Theta_s = .87266460-01$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .36651899+00 | .16351405+01 | .12877345-01 | .23893436+02 | .91718262+01 |
| .36957331+00 | .16353696+01 | .12499861-01 | .25043682+02 | .97012303+01 |
| .37262764+00 | .16356047+01 | .12116674-01 | .26326222+02 | .10290635+02 |
| .37568196+00 | .16358465+01 | .11726651-01 | .27766392+02 | .10951465+02 |
| .37873624+00 | .16360969+01 | .11329126-01 | .29396639+02 | .11698336+02 |
| .38179051+00 | .16363560+01 | .10922048-01 | .31259337+02 | .12550323+02 |
| .38397213+00 | .16365471+01 | .10624353-01 | .32762678+02 | .13236969+02 |
| .38615375+00 | .16367438+01 | .10320082-01 | .34439578+02 | .14001956+02 |
| .38833538+00 | .16369470+01 | .10008231-01 | .36323708+02 | .14860406+02 |
| .39051700+00 | .16371573+01 | .96876211-02 | .38458407+02 | .15831765+02 |
| .39269862+00 | .16373758+01 | .93569495-02 | .40900502+02 | .16941521+02 |
| .39400760+00 | .16375114+01 | .91529787-02 | .42543969+02 | .17687545+02 |
| .39531657+00 | .16376508+01 | .89442842-02 | .44345985+02 | .18504847+02 |
| .39662554+00 | .16377942+01 | .87303482-02 | .46332233+02 | .19404922+02 |
| .39793452+00 | .16379421+01 | .85105933-02 | .48534465+02 | .20401979+02 |
| .39924349+00 | .16380952+01 | .82843006-02 | .50992580+02 | .21513860+02 |
| .40055247+00 | .16382540+01 | .80505274-02 | .53757426+02 | .22763291+02 |
| .40186144+00 | .16384193+01 | .78082569-02 | .56894988+02 | .24179751+02 |
| .40317041+00 | .16385920+01 | .75561628-02 | .60492774+02 | .25802309+02 |
| .40447939+00 | .16387734+01 | .72925538-02 | .64669659+02 | .27684005+02 |
| .40578836+00 | .16389650+01 | .70153289-02 | .69592149+02 | .29899090+02 |
| .40709731+00 | .16391690+01 | .67214631-02 | .75502132+02 | .32555353+02 |
| .40840631+00 | .16393882+01 | .64070188-02 | .82767707+02 | .35816713+02 |
| .40971528+00 | .16396271+01 | .60600057-02 | .91983764+02 | .39947881+02 |
| .41102426+00 | .16398922+01 | .56891330-02 | .10419462+03 | .45413172+02 |
| .41233323+00 | .16401954+01 | .52602626-02 | .12146741+03 | .53130816+02 |
| .41364221+00 | .16405608+01 | .47458149-02 | .14878117+03 | .65310222+02 |
| .41481444+00 | .16409958+01 | .41362531-02 | .19544044+03 | .86065553+02 |

$$.55134296-06 = \Delta S/R$$

$$.11598375+01 = P_s/P_{\infty}$$

$$.10930434+01 = \rho_s/\rho_{\infty}$$

$$.10611083+01 = T_s/T_{\infty}$$

TABLE 40. CONICAL FLOWFIELD  $\theta_s = 5.0$  DEG;  $M_\infty = 3.0$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .85438021+00 | .29999978+01 | .87266460-01 | .34490862+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .87266460-01 | .17087284+01 | .87266460-01 | .57150261+01 | .50000000+00 |
| .94684105-01 | .17088107+01 | .80425167-01 | .58278440+01 | .55345910+00 |
| .10210175+00 | .17090195+01 | .74559456-01 | .59479209+01 | .60941225+00 |
| .10951940+00 | .17093135+01 | .69461384-01 | .60757157+01 | .66808193+00 |
| .11693704+00 | .17096658+01 | .64978862-01 | .62117701+01 | .72971514+00 |
| .12435469+00 | .17100584+01 | .60997810-01 | .63567165+01 | .79458755+00 |
| .13177233+00 | .17104788+01 | .57430806-01 | .65112869+01 | .86300830+00 |
| .13918998+00 | .17109185+01 | .54209629-01 | .66763230+01 | .93532533+00 |
| .14573496+00 | .17113177+01 | .51611152-01 | .68314058+01 | .10026832+01 |
| .15227994+00 | .17117243+01 | .49209390-01 | .69961523+01 | .10736858+01 |
| .15882492+00 | .17121361+01 | .46979122-01 | .71714259+01 | .11486760+01 |
| .16536990+00 | .17125517+01 | .44899130-01 | .73582106+01 | .12280415+01 |
| .17191488+00 | .17129699+01 | .42951399-01 | .75576280+01 | .13122217+01 |
| .17845986+00 | .17133901+01 | .41120503-01 | .77709633+01 | .14017173+01 |
| .18500485+00 | .17138117+01 | .39393136-01 | .79996936+01 | .14971015+01 |
| .19067716+00 | .17141781+01 | .37970858-01 | .82116917+01 | .15850383+01 |
| .19634948+00 | .17145454+01 | .36610980-01 | .84378076+01 | .16783837+01 |
| .20202180+00 | .17149135+01 | .35307541-01 | .86794990+01 | .17776983+01 |
| .20769411+00 | .17152827+01 | .34055153-01 | .89384412+01 | .18836243+01 |
| .21336643+00 | .17156530+01 | .32848932-01 | .92165669+01 | .19969015+01 |
| .21903675+00 | .17160248+01 | .31694414-01 | .95161192+01 | .21183863+01 |
| .22471106+00 | .17163984+01 | .30567435-01 | .98397155+01 | .22490767+01 |
| .22951072+00 | .17167161+01 | .29630341-01 | .10134573+02 | .23677130+01 |
| .23431037+00 | .17170356+01 | .28725196-01 | .10451010+02 | .24946002+01 |
| .23911002+00 | .17173572+01 | .27839959-01 | .10791549+02 | .26306950+01 |
| .24390968+00 | .17176812+01 | .26972570-01 | .11159127+02 | .27771107+01 |
| .24870933+00 | .17180080+01 | .26121091-01 | .11557195+02 | .29351524+01 |
| .25350898+00 | .17183380+01 | .25283650-01 | .11989828+02 | .31063613+01 |
| .25830863+00 | .17186718+01 | .24458274-01 | .12461891+02 | .32925722+01 |
| .26310828+00 | .17189480+01 | .23790598-01 | .12981496+02 | .34576100+01 |
| .26790793+00 | .17192274+01 | .23128677-01 | .13535189+02 | .36355885+01 |
| .27270758+00 | .17195104+01 | .22471368-01 | .14127461+02 | .38281960+01 |
| .27750723+00 | .17197975+01 | .21817558-01 | .14763649+02 | .40374380+01 |
| .28230688+00 | .17200890+01 | .21166030-01 | .15450152+02 | .42657144+01 |
| .28710653+00 | .17203857+01 | .20515457-01 | .16189471+02 | .45159267+01 |
| .29190618+00 | .17206880+01 | .19864473-01 | .16986798+02 | .47916192+01 |
| .29670583+00 | .17209277+01 | .19356865-01 | .17844726+02 | .50264282+01 |
| .30150548+00 | .17211716+01 | .18847253-01 | .18777236+02 | .52817822+01 |
| .30630513+00 | .17214204+01 | .18334758-01 | .19802395+02 | .55606905+01 |
| .31110478+00 | .17216745+01 | .17818395-01 | .19999989+02 | .58667999+01 |

TABLE 40. (Concluded) <sup>21</sup>

$$M_{\infty} = .29999978+01$$

$$\Theta_s = .87266460-01$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $\tau$       |
|--------------|--------------|--------------|--------------|--------------|
| .30106918+00 | .17219347+01 | .17297033-01 | .19982035+02 | .62045840+01 |
| .30412349+00 | .17222018+01 | .16769491-01 | .20963450+02 | .65795906+01 |
| .30717776+00 | .17224773+01 | .16234383-01 | .22063040+02 | .69988040+01 |
| .30935938+00 | .17226793+01 | .15846480-01 | .22933882+02 | .73301572+01 |
| .31154101+00 | .17228861+01 | .15452985-01 | .23888075+02 | .76926163+01 |
| .31372263+00 | .17230982+01 | .15053127-01 | .24938948+02 | .80911180+01 |
| .31590425+00 | .17233163+01 | .14645789-01 | .26102962+02 | .85317531+01 |
| .31808588+00 | .17235410+01 | .14229830-01 | .27400694+02 | .90221281+01 |
| .32026750+00 | .17237733+01 | .13803832-01 | .28858291+02 | .95719000+01 |
| .32244912+00 | .17240141+01 | .13366163-01 | .30509517+02 | .10193526+02 |
| .32375810+00 | .17241632+01 | .13097081-01 | .31611139+02 | .10607605+02 |
| .32506707+00 | .17243161+01 | .12822531-01 | .32810287+02 | .11057803+02 |
| .32637604+00 | .17244733+01 | .12541886-01 | .34121549+02 | .11549487+02 |
| .32768502+00 | .17246352+01 | .12254469-01 | .35562727+02 | .12069205+02 |
| .32899399+00 | .17248024+01 | .11959378-01 | .37155828+02 | .12685045+02 |
| .33030296+00 | .17249753+01 | .11655632-01 | .38928407+02 | .13347126+02 |
| .33161194+00 | .17251548+01 | .11342064-01 | .40915527+02 | .14088318+02 |
| .33292091+00 | .17253418+01 | .11017106-01 | .43162615+02 | .14925276+02 |
| .33422989+00 | .17255375+01 | .10679036-01 | .45729842+02 | .15880049+02 |
| .33553886+00 | .17257433+01 | .10325421-01 | .48698892+02 | .16982540+02 |
| .33684783+00 | .17259611+01 | .99532008-02 | .52184172+02 | .18274595+02 |
| .33815681+00 | .17261935+01 | .95582120-02 | .56351988+02 | .19816988+02 |
| .33946578+00 | .17264441+01 | .91345869-02 | .61456308+02 | .21702430+02 |
| .34077476+00 | .17267184+01 | .86735487-02 | .67910166+02 | .24001543+02 |
| .34208373+00 | .17270252+01 | .81609697-02 | .76447862+02 | .27221790+02 |
| .34339270+00 | .17273803+01 | .75712129-02 | .88559486+02 | .31645215+02 |
| .34470168+00 | .17278190+01 | .68470612-02 | .10804158+03 | .38790788+02 |
| .34490862+00 | .17279011+01 | .67119673-02 | .11240861+03 | .40384970+02 |

$$.35413541-05 = \Delta S/R$$

$$.12126438+01 = P_s/P_{\infty}$$

$$.11226343+01 = \rho_s/\rho_{\infty}$$

$$.10801770+01 = T_s/T_{\infty}$$



TABLE 41. CONICAL FLOWFIELD  $\theta_s = 5.0$  DEG;  $M_\infty = 4.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .90702194+00 | .39999973+01 | .87266460-01 | .26239745+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .87266460-01 | .18140159+01 | .87266460-01 | .57150261+01 | .50000000+00 |
| .92502445-01 | .18140611+01 | .82323913-01 | .58230925+01 | .54019191+00 |
| .97738430-01 | .18141814+01 | .77898351-01 | .59376932+01 | .58219584+00 |
| .10297441+00 | .18143584+01 | .73902987-01 | .60592874+01 | .62616635+00 |
| .10821040+00 | .18145792+01 | .70269713-01 | .61884000+01 | .67227527+00 |
| .11344638+00 | .18148341+01 | .66944179-01 | .63256301+01 | .72071439+00 |
| .11868237+00 | .18151157+01 | .63882379-01 | .64716614+01 | .77169877+00 |
| .12391835+00 | .18154186+01 | .61048221-01 | .66272736+01 | .82547040+00 |
| .12915434+00 | .18157389+01 | .58411753-01 | .67933580+01 | .88230296+00 |
| .13439032+00 | .18160732+01 | .55947859-01 | .69709364+01 | .94250735+00 |
| .13875365+00 | .18163609+01 | .54010987-01 | .71285402+01 | .99550782+00 |
| .14311677+00 | .18166557+01 | .52168472-01 | .72957125+01 | .10513280+01 |
| .14748029+00 | .18169568+01 | .50410902-01 | .74733300+01 | .11102298+01 |
| .15184361+00 | .18172636+01 | .48729902-01 | .76623876+01 | .11725097+01 |
| .15620693+00 | .18175756+01 | .47117993-01 | .78640192+01 | .12385041+01 |
| .16057025+00 | .18178926+01 | .45568414-01 | .80795224+01 | .13085967+01 |
| .16493357+00 | .18182143+01 | .44075053-01 | .83103899+01 | .13832277+01 |
| .16929689+00 | .18185407+01 | .42632312-01 | .85583489+01 | .14629049+01 |
| .17366021+00 | .18188718+01 | .41235028-01 | .88254080+01 | .15482172+01 |
| .17715087+00 | .18191401+01 | .40146699-01 | .90543729+01 | .16209824+01 |
| .18064152+00 | .18194117+01 | .39082071-01 | .92984508+01 | .16981981+01 |
| .18413218+00 | .18196867+01 | .38038924-01 | .95592375+01 | .17803293+01 |
| .18762284+00 | .18199652+01 | .37015097-01 | .98385719+01 | .18679106+01 |
| .19111349+00 | .18202475+01 | .36008509-01 | .10138582+02 | .19615597+01 |
| .19460415+00 | .18205339+01 | .35017090-01 | .10461752+02 | .20619960+01 |
| .19809481+00 | .18208247+01 | .34038795-01 | .10810993+02 | .21700616+01 |
| .20158546+00 | .18211204+01 | .33071551-01 | .11189750+02 | .22867505+01 |
| .20507612+00 | .18214214+01 | .32113243-01 | .11602128+02 | .24132453+01 |
| .20769411+00 | .18216509+01 | .31399060-01 | .11936408+02 | .25153948+01 |
| .21031211+00 | .18218840+01 | .30687727-01 | .12294816+02 | .26245589+01 |
| .21293010+00 | .18221211+01 | .29978178-01 | .12680216+02 | .27415587+01 |
| .21554809+00 | .18223623+01 | .29269367-01 | .13095966+02 | .28673553+01 |
| .21816608+00 | .18226082+01 | .28560158-01 | .13546029+02 | .30030812+01 |
| .22078408+00 | .18228591+01 | .27849227-01 | .14035121+02 | .31500824+01 |
| .22340207+00 | .18231157+01 | .27135249-01 | .14568910+02 | .33099740+01 |
| .22602002+00 | .18233795+01 | .26416890-01 | .15154263+02 | .34847085+01 |
| .22863796+00 | .18236503+01 | .25692165-01 | .15799624+02 | .36766847+01 |
| .23038326+00 | .18239351+01 | .25204487-01 | .16268277+02 | .38156864+01 |
| .23212856+00 | .18240237+01 | .24712462-01 | .16771949+02 | .39647165+01 |
| .23387386+00 | .18242164+01 | .24215277-01 | .17315039+02 | .41250193+01 |

TABLE 41. (Concluded)

$$M_{\infty} = .39999973+01$$

$$\Theta_s = .87266460-01$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .23561916+00 | .18244135+01 | .23712125-01 | .17902760+02 | .42980668+01 |
| .23736446+00 | .18246156+01 | .23202054-01 | .18541331+02 | .44856137+01 |
| .23910975+00 | .18248231+01 | .22683959-01 | .19238265+02 | .46897761+01 |
| .24085505+00 | .18250366+01 | .22156551-01 | .20002715+02 | .49131298+01 |
| .24260035+00 | .18252549+01 | .21618359-01 | .20845978+02 | .51588487+01 |
| .24434565+00 | .18254847+01 | .21067601-01 | .21782197+02 | .54309013+01 |
| .24521830+00 | .18256018+01 | .20786863-01 | .22290603+02 | .55783265+01 |
| .24609095+00 | .18257211+01 | .20502143-01 | .22829366+02 | .57343287+01 |
| .24696360+00 | .18258429+01 | .20213094-01 | .23401576+02 | .58997721+01 |
| .24783625+00 | .18259674+01 | .19919317-01 | .24010794+02 | .60756519+01 |
| .24870890+00 | .18260947+01 | .19620452-01 | .24661121+02 | .62631132+01 |
| .24958155+00 | .18262251+01 | .19315936-01 | .25357347+02 | .64634923+01 |
| .25045419+00 | .18263588+01 | .19005209-01 | .26105096+02 | .66783565+01 |
| .25132684+00 | .18264963+01 | .18687703-01 | .26911007+02 | .69095557+01 |
| .25219949+00 | .18266377+01 | .18362612-01 | .27783013+02 | .71592973+01 |
| .25307214+00 | .18267836+01 | .18029116-01 | .28730676+02 | .74302397+01 |
| .25394479+00 | .18269344+01 | .17686144-01 | .29765650+02 | .77256198+01 |
| .25481744+00 | .18270907+01 | .17332539-01 | .30902360+02 | .80494410+01 |
| .25569009+00 | .18272533+01 | .16966835-01 | .32158863+02 | .84067088+01 |
| .25656274+00 | .18274229+01 | .16587198-01 | .33558228+02 | .88038125+01 |
| .25743539+00 | .18276008+01 | .16191382-01 | .35130484+02 | .92490591+01 |
| .25830804+00 | .18277883+01 | .15776511-01 | .36915697+02 | .97535205+01 |
| .25918069+00 | .18279871+01 | .15338793-01 | .38968917+02 | .10332392+02 |
| .26005334+00 | .18281999+01 | .14873061-01 | .41368627+02 | .11007308+02 |
| .26092599+00 | .18284302+01 | .14371965-01 | .44232094+02 | .11810557+02 |
| .26179864+00 | .18286833+01 | .13824426-01 | .47745775+02 | .12793403+02 |
| .26267129+00 | .18289745+01 | .13412986-01 | .50691417+02 | .13615222+02 |

$$.61118975-04 = \Delta S/R$$

$$.13362939+01 = P_s/P_{\infty}$$

$$.11899510+01 = \rho_s/\rho_{\infty}$$

$$.11229823+01 = T_s/T_{\infty}$$



TABLE 42. CONICAL FLOWFIELD  $\theta_s = 5.0$  DEG;  $M_\infty = 5.0$ 

| $\underline{u}_s$    | $\underline{M}_\infty$ | $\underline{\theta}_s$ | $\underline{\theta}_w$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .93516578+00         | .49999840+01           | .87266460-01           | .21643371+00           |                 |
| $\underline{\theta}$ | $\underline{M}_1^*$    | $\underline{\psi}_1$   | $\underline{x}$        | $\underline{r}$ |
| .87266460-01         | .18702965+01           | .87266460-01           | .57150261+01           | .50000000+00    |
| .90757117-01         | .18703179+01           | .83908678-01           | .58044221+01           | .52824376+00    |
| .94247773-01         | .18703770+01           | .80793386-01           | .58982422+01           | .55754799+00    |
| .97738430-01         | .18704674+01           | .77890179-01           | .59967617+01           | .58798756+00    |
| .10122909+00         | .18705840+01           | .75173599-01           | .61002874+01           | .61964452+00    |
| .10471974+00         | .18707228+01           | .72622117-01           | .62091604+01           | .65260897+00    |
| .10821040+00         | .18708805+01           | .70217362-01           | .63237605+01           | .68698014+00    |
| .11170106+00         | .18710545+01           | .67943521-01           | .64445111+01           | .72286762+00    |
| .11519171+00         | .18712426+01           | .65786885-01           | .65718850+01           | .76039290+00    |
| .11868237+00         | .18714431+01           | .63735484-01           | .67064121+01           | .79969109+00    |
| .12217303+00         | .18716545+01           | .61778781-01           | .68486866+01           | .84091282+00    |
| .12566368+00         | .18718758+01           | .59907455-01           | .69993767+01           | .88422673+00    |
| .12915434+00         | .18721059+01           | .58113195-01           | .71592387+01           | .92982256+00    |
| .13264500+00         | .18723441+01           | .56388542-01           | .73291280+01           | .97791424+00    |
| .13613565+00         | .18725900+01           | .54726757-01           | .75100207+01           | .10287446+01    |
| .13962631+00         | .18728430+01           | .53121705-01           | .77030297+01           | .10825900+01    |
| .14224430+00         | .18730372+01           | .51951742-01           | .78565009+01           | .11251412+01    |
| .14486229+00         | .18732352+01           | .50808305-01           | .80181149+01           | .11697162+01    |
| .14748029+00         | .18734369+01           | .49669291-01           | .81885563+01           | .12164831+01    |
| .15009828+00         | .18736424+01           | .48592702-01           | .83685908+01           | .12656300+01    |
| .15271627+00         | .18738516+01           | .47516618-01           | .85590822+01           | .13173684+01    |
| .15533426+00         | .18740645+01           | .46459183-01           | .87610065+01           | .13719366+01    |
| .15795226+00         | .18742813+01           | .45418594-01           | .89754696+01           | .14296045+01    |
| .16057025+00         | .18745021+01           | .44393089-01           | .92037361+01           | .14906795+01    |
| .16318824+00         | .18747271+01           | .43380912-01           | .94472535+01           | .15555132+01    |
| .16580623+00         | .18749564+01           | .42380322-01           | .97076906+01           | .16245098+01    |
| .16842423+00         | .18751904+01           | .41389553-01           | .99869827+01           | .16981371+01    |
| .17104222+00         | .18754292+01           | .40406806-01           | .10287388+02           | .17769399+01    |
| .17366021+00         | .18756732+01           | .39430222-01           | .10611560+02           | .18615570+01    |
| .17627820+00         | .18759229+01           | .38457848-01           | .10962643+02           | .19527435+01    |
| .17889620+00         | .18761787+01           | .37487611-01           | .11344395+02           | .20514001+01    |
| .18064152+00         | .18763530+01           | .36840873-01           | .11618136+02           | .21218477+01    |
| .18238685+00         | .18765304+01           | .36193380-01           | .11909079+02           | .21964687+01    |
| .18413217+00         | .18767116+01           | .35544418-01           | .12219034+02           | .22756945+01    |
| .18587746+00         | .18768968+01           | .34893150-01           | .12550093+02           | .23600221+01    |
| .18762276+00         | .18770860+01           | .34238627-01           | .12904684+02           | .24500291+01    |
| .18936806+00         | .18772795+01           | .33579826-01           | .13285649+02           | .25463886+01    |
| .19111336+00         | .18774776+01           | .32915646-01           | .13696328+02           | .26498919+01    |
| .19285866+00         | .18776809+01           | .32244846-01           | .14140699+02           | .27614786+01    |
| .19460396+00         | .18778897+01           | .31566009-01           | .14623524+02           | .28822723+01    |

TABLE 42. (Concluded)

$$M_{\infty} = .49999840+01$$

$$\Theta_s = .87266460-01$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .19634926+00 | .18781048+01 | .30877489-01 | .15150578+02 | .30136328+01 |
| .19809459+00 | .18783268+01 | .30177422-01 | .15728943+02 | .31572243+01 |
| .19983985+00 | .18785565+01 | .29463569-01 | .16367420+02 | .33151114+01 |
| .20158515+00 | .18787951+01 | .28733229-01 | .17077112+02 | .34898932+01 |
| .20333045+00 | .18790437+01 | .27983177-01 | .17872296+02 | .36849045+01 |
| .20507575+00 | .18793040+01 | .27209330-01 | .18771695+02 | .39045075+01 |
| .20594840+00 | .18794391+01 | .26811909-01 | .19268019+02 | .40252888+01 |
| .20682105+00 | .18795780+01 | .26406497-01 | .19800498+02 | .41545663+01 |
| .20769370+00 | .18797209+01 | .25992159-01 | .20373834+02 | .42934299+01 |
| .20856635+00 | .18798684+01 | .25567856-01 | .20993653+02 | .44431831+01 |
| .20943899+00 | .18800208+01 | .25132354-01 | .21666759+02 | .46054000+01 |
| .21031164+00 | .18801789+01 | .24684180-01 | .22401510+02 | .47820114+01 |
| .21118429+00 | .18803432+01 | .24221528-01 | .23208288+02 | .49754124+01 |
| .21205694+00 | .18805147+01 | .23742236-01 | .24100235+02 | .51886307+01 |
| .21292959+00 | .18806944+01 | .23243576-01 | .25094288+02 | .54255618+01 |
| .21380224+00 | .18808839+01 | .22722062-01 | .26212801+02 | .56913406+01 |
| .21467489+00 | .18810847+01 | .22173163-01 | .27486104+02 | .59929221+01 |
| .21554754+00 | .18812995+01 | .21590646-01 | .28956834+02 | .63400677+01 |
| .21642019+00 | .18815318+01 | .20965856-01 | .30687603+02 | .67470865+01 |
| .21643371+00 | .18815355+01 | .20955803-01 | .30716914+02 | .67539663+01 |

$$.42747334-03 = \Delta S/R$$

$$.14833703+01 = P_s/P_{\infty}$$

$$.12666990+01 = \rho_s/\rho_{\infty}$$

$$.11710519+01 = T_s/T_{\infty}$$

TABLE 43. CONICAL FLOWFIELD  $\theta_s = 5.0$  DEG;  $M_\infty = 6.0$

| $u_s$        | $M_\infty$    | $\theta_s$   | $\theta_w$   |              |
|--------------|---------------|--------------|--------------|--------------|
| .95176963+00 | .599999808+01 | .87266460-01 | .18790453+00 |              |
| $\theta$     | $M^*_1$       | $\psi_1$     | $x$          | $r$          |
| .87266460-01 | .19035036+01  | .87266460-01 | .57150261+01 | .50000000+00 |
| .90757117-01 | .19035254+01  | .83908268-01 | .58215760+01 | .52980489+00 |
| .94247773-01 | .19035856+01  | .80790382-01 | .59343978+01 | .56096570+00 |
| .97738430-01 | .19036778+01  | .77880831-01 | .60539901+01 | .59359885+00 |
| .10122909+00 | .19037970+01  | .75153043-01 | .61809182+01 | .62783470+00 |
| .10471974+00 | .19039394+01  | .72584662-01 | .63158254+01 | .66381991+00 |
| .10821040+00 | .19041017+01  | .70156663-01 | .64594430+01 | .70171997+00 |
| .11126472+00 | .19042581+01  | .68134405-01 | .66929089+01 | .73660035+00 |
| .11431905+00 | .19044265+01  | .66197474-01 | .67343203+01 | .77323243+00 |
| .11737337+00 | .19046059+01  | .64337326-01 | .68843982+01 | .81177627+00 |
| .12042770+00 | .19047952+01  | .62546282-01 | .70439633+01 | .85241306+00 |
| .12348202+00 | .19049940+01  | .60817395-01 | .72139515+01 | .89534865+00 |
| .12653635+00 | .19052016+01  | .59144327-01 | .73954358+01 | .94081806+00 |
| .12915434+00 | .19053862+01  | .57750259-01 | .75610774+01 | .98201228+00 |
| .13177233+00 | .19055769+01  | .56389464-01 | .77369645+01 | .10254600+01 |
| .13439032+00 | .19057735+01  | .55058692-01 | .79241160+01 | .10713823+01 |
| .13700832+00 | .19059760+01  | .53754827-01 | .81236991+01 | .11200312+01 |
| .13962631+00 | .19061844+01  | .52474868-01 | .83370593+01 | .11716970+01 |
| .14224430+00 | .19063988+01  | .51215887-01 | .85657572+01 | .12267148+01 |
| .14442596+00 | .19065822+01  | .50180668-01 | .87693584+01 | .12754032+01 |
| .14660762+00 | .19067700+01  | .49156334-01 | .89860889+01 | .13269498+01 |
| .14878928+00 | .19069624+01  | .48141191-01 | .92173532+01 | .13816542+01 |
| .15097094+00 | .19071596+01  | .47133507-01 | .94647745+01 | .14398618+01 |
| .15315260+00 | .19073619+01  | .46131492-01 | .97302443+01 | .15019739+01 |
| .15533426+00 | .19075696+01  | .45133276-01 | .10015982+02 | .15688460+01 |
| .15707959+00 | .19077398+01  | .44336101-01 | .10260912+02 | .16251683+01 |
| .15882492+00 | .19079140+01  | .43539001-01 | .10522054+02 | .16853596+01 |
| .16057024+00 | .19080925+01  | .42740813-01 | .10801228+02 | .17494166+01 |
| .16231554+00 | .19082761+01  | .41940302-01 | .11100555+02 | .18177846+01 |
| .16406084+00 | .19084644+01  | .41136036-01 | .11422535+02 | .18909871+01 |
| .16580614+00 | .19086581+01  | .40326471-01 | .11770126+02 | .19696418+01 |
| .16711511+00 | .19088071+01  | .39714798-01 | .12049726+02 | .20326488+01 |
| .16842408+00 | .19089595+01  | .39098367-01 | .12347458+02 | .20994989+01 |
| .16973306+00 | .19091157+01  | .38476277-01 | .12665358+02 | .21706147+01 |
| .17104203+00 | .19092759+01  | .37847558-01 | .13005798+02 | .22464882+01 |
| .17235101+00 | .19094405+01  | .37211029-01 | .13371575+02 | .23276981+01 |
| .17365998+00 | .19096099+01  | .36565401-01 | .13766001+02 | .24149286+01 |
| .17453263+00 | .19097258+01  | .36129180-01 | .14046799+02 | .24768253+01 |
| .17540528+00 | .19098441+01  | .35687769-01 | .14343457+02 | .25420420+01 |
| .17627793+00 | .19099652+01  | .35240589-01 | .14657547+02 | .26109017+01 |

TABLE 43. (Concluded)

$$M_{\infty} = .59999806+01$$

$$\Theta_s = .87266460-01$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .17715058+00 | .19100892+01 | .34787022-01 | .14990870+02 | .26837746+01 |
| .17802323+00 | .19102162+01 | .34326358-01 | .15345518+02 | .27610888+01 |
| .17887588+00 | .19103467+01 | .33857809-01 | .15723916+02 | .28433412+01 |
| .17933220+00 | .19104134+01 | .33620294-01 | .15922894+02 | .28864974+01 |
| .17976853+00 | .19104809+01 | .33380453-01 | .16128917+02 | .29311144+01 |
| .18020485+00 | .19105496+01 | .33138152-01 | .16342422+02 | .29772816+01 |
| .18064117+00 | .19106192+01 | .32893240-01 | .16563891+02 | .30250967+01 |
| .18107750+00 | .19106900+01 | .32645563-01 | .16793899+02 | .30746669+01 |
| .18151382+00 | .19107620+01 | .32394944-01 | .17032871+02 | .31261094+01 |
| .18195015+00 | .19108352+01 | .32141205-01 | .17281595+02 | .31795536+01 |
| .18238647+00 | .19109097+01 | .31884126-01 | .17540723+02 | .32351424+01 |
| .18282280+00 | .19109856+01 | .31623499-01 | .17811035+02 | .32930342+01 |
| .18325912+00 | .19110629+01 | .31359069-01 | .18093399+02 | .33534047+01 |
| .18369545+00 | .19111419+01 | .31090572-01 | .18388785+02 | .34164511+01 |
| .18413177+00 | .19112224+01 | .30817702-01 | .18698280+02 | .34823929+01 |
| .18456810+00 | .19113048+01 | .30540131-01 | .19023112+02 | .35514789+01 |
| .18500442+00 | .19113891+01 | .30257486-01 | .19364671+02 | .36239901+01 |
| .18544075+00 | .19114753+01 | .29969350-01 | .19724543+02 | .37002465+01 |
| .18587707+00 | .19115639+01 | .29675253-01 | .20104536+02 | .37806132+01 |
| .18631339+00 | .19116548+01 | .29374661-01 | .20506752+02 | .38655137+01 |
| .18674972+00 | .19117483+01 | .29066958-01 | .20933617+02 | .39554369+01 |
| .18718604+00 | .19118446+01 | .28751444-01 | .21387975+02 | .40509545+01 |
| .18762237+00 | .19119441+01 | .28427288-01 | .21873194+02 | .41527436+01 |
| .18790453+00 | .19120402+01 | .28212618-01 | .22205277+02 | .42222832+01 |

$$.17092787-02 = \Delta S/R$$

$$.16539630+01 = P_s/P_{\infty}$$

$$.13514996+01 = \rho_s/\rho_{\infty}$$

$$.12237984+01 = T_s/T_{\infty}$$

TABLE 44. CONICAL FLOWFIELD  $\theta_s = 5.0$  DEG;  $M_\infty = 8.0$

| $u_s$        | $M_\infty$    | $\theta_s$    | $\theta_w$   |              |
|--------------|---------------|---------------|--------------|--------------|
| .96947218+00 | .799999403+01 | .87266460-01  | .15547041+00 |              |
| $e$          | $M_1^*$       | $\psi_1$      | $x$          | $r$          |
| .87266460-01 | .19389080+01  | .87266460-01  | .57150261+01 | .50000000+00 |
| .89011788-01 | .19389137+01  | .85554955-01  | .57829432+01 | .51611389+00 |
| .90757117-01 | .19389302+01  | .83907338-01  | .58533770+01 | .53269900+00 |
| .92502445-01 | .19389565+01  | .82318423-01  | .59264598+01 | .54978101+00 |
| .94247773-01 | .19389917+01  | .80783548-01  | .60023350+01 | .56738766+00 |
| .95993102-01 | .19390351+01  | .79298502-01  | .60811577+01 | .58554883+00 |
| .97738430-01 | .19390862+01  | .77859463-01  | .61630978+01 | .60429675+00 |
| .99483758-01 | .19391443+01  | .76462946-01  | .62483388+01 | .62366706+00 |
| .10122909+00 | .19392090+01  | .75105754-01  | .63370818+01 | .64369721+00 |
| .10297441+00 | .19392798+01  | .73784946-01  | .64295460+01 | .66443885+00 |
| .10471974+00 | .19393565+01  | .72497803-01  | .65259711+01 | .68590710+00 |
| .10646507+00 | .19394387+01  | .71241794-01  | .66266202+01 | .70818130+00 |
| .10821040+00 | .19395262+01  | .70014555-01  | .67317826+01 | .73130551+00 |
| .10995573+00 | .19396186+01  | .68813870-01  | .68417766+01 | .75533905+00 |
| .11170106+00 | .19397159+01  | .67637644-01  | .69569549+01 | .78034740+00 |
| .11344638+00 | .19398178+01  | .66483890-01  | .70777074+01 | .80640277+00 |
| .11475538+00 | .19398973+01  | .653632175-01 | .71721888+01 | .82667921+00 |
| .11606438+00 | .19399793+01  | .642791259-01 | .72702496+01 | .84762651+00 |
| .11737337+00 | .19400637+01  | .632360389-01 | .73721085+01 | .86928479+00 |
| .11868237+00 | .19401507+01  | .62138826-01  | .74780037+01 | .89169779+00 |
| .11999137+00 | .19402401+01  | .61025846-01  | .75881952+01 | .91491306+00 |
| .12130036+00 | .19403319+01  | .601520735-01 | .77029674+01 | .93898257+00 |
| .12260936+00 | .19404263+01  | .60722781-01  | .78226327+01 | .96396326+00 |
| .12391835+00 | .19405231+01  | .609931276-01 | .79475343+01 | .98991752+00 |
| .12522735+00 | .19406224+01  | .609146512-01 | .80780516+01 | .10169143+01 |
| .12653635+00 | .19407243+01  | .60364769-01  | .82146032+01 | .10450293+01 |
| .12784534+00 | .19408268+01  | .60588322-01  | .83576549+01 | .10743448+01 |
| .12915434+00 | .19409359+01  | .606815421-01 | .85077239+01 | .11049602+01 |
| .13046334+00 | .19410458+01  | .606045301-01 | .86653897+01 | .11369736+01 |
| .13177233+00 | .19411586+01  | .605277172-01 | .88313016+01 | .11705039+01 |
| .13308133+00 | .19412743+01  | .604510202-01 | .90061911+01 | .12056321+01 |
| .13395399+00 | .19413531+01  | .603999100-01 | .91281765+01 | .12301221+01 |
| .13482666+00 | .19414333+01  | .603487854-01 | .92547907+01 | .12554087+01 |
| .13569931+00 | .19415152+01  | .602976193-01 | .93863300+01 | .12815947+01 |
| .13657196+00 | .19415988+01  | .602463813-01 | .95231212+01 | .13087383+01 |
| .13744461+00 | .19416839+01  | .601950391-01 | .96655233+01 | .13369032+01 |
| .13831726+00 | .19417706+01  | .601435594-01 | .98139305+01 | .13661594+01 |
| .13918991+00 | .19418590+01  | .600919067-01 | .99687768+01 | .13965839+01 |
| .14006256+00 | .19419492+01  | .600400427-01 | .10130544+02 | .14282616+01 |
| .14093521+00 | .19420413+01  | .600879292-01 | .10299767+02 | .14612877+01 |

TABLE 44. (Concluded)

$$M_{\infty} = .79999403+01$$

$$\Theta_s = .87266460-01$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .14180786+00 | .19421354+01 | .49355203-01 | .10477042+02 | .14957667+01 |
| .14268051+00 | .19422314+01 | .48827702-01 | .10663037+02 | .15318164+01 |
| .14355316+00 | .19423297+01 | .48296271-01 | .10858503+02 | .15695688+01 |
| .14442581+00 | .19424303+01 | .47760343-01 | .11064285+02 | .16091723+01 |
| .14529845+00 | .19425333+01 | .47219310-01 | .11281345+02 | .16507953+01 |
| .14617110+00 | .19426390+01 | .46672473-01 | .11510780+02 | .16946298+01 |
| .14660743+00 | .19426928+01 | .46396645-01 | .11630525+02 | .17174438+01 |
| .14704375+00 | .19427474+01 | .46119075-01 | .11753850+02 | .17408955+01 |
| .14748008+00 | .19428023+01 | .45839654-01 | .11880942+02 | .17650174+01 |
| .14791640+00 | .19428589+01 | .45558259-01 | .12012003+02 | .17898449+01 |
| .14835273+00 | .19429159+01 | .45274768-01 | .12147255+02 | .18154162+01 |
| .14878905+00 | .19429737+01 | .44989048-01 | .12286932+02 | .18417723+01 |
| .14922538+00 | .19430324+01 | .44700949-01 | .12431293+02 | .18689577+01 |
| .14966170+00 | .19430920+01 | .44410329-01 | .12580615+02 | .18970210+01 |
| .15009803+00 | .19431527+01 | .44117019-01 | .12735204+02 | .19260148+01 |
| .15053435+00 | .19432143+01 | .43820834-01 | .12895392+02 | .19559965+01 |
| .15097068+00 | .19432770+01 | .43521587-01 | .13061543+02 | .19870291+01 |
| .15140700+00 | .19433408+01 | .43219067-01 | .13234056+02 | .20191817+01 |
| .15184332+00 | .19434058+01 | .42913046-01 | .13413370+02 | .20525297+01 |
| .15227965+00 | .19434721+01 | .42603279-01 | .13599975+02 | .20871574+01 |
| .15271597+00 | .19435396+01 | .42289494-01 | .13794408+02 | .21231577+01 |
| .15315230+00 | .19436086+01 | .41971389-01 | .13997271+02 | .21606336+01 |
| .15358862+00 | .19436790+01 | .41648634-01 | .14209231+02 | .21997000+01 |
| .15402495+00 | .19437511+01 | .41320872-01 | .14431045+02 | .22404865+01 |
| .15446127+00 | .19438248+01 | .40987691-01 | .14663560+02 | .22831383+01 |
| .15489760+00 | .19439004+01 | .40648634-01 | .14907736+02 | .23278196+01 |
| .15533392+00 | .19439779+01 | .40303197-01 | .15164671+02 | .23747181+01 |
| .15547041+00 | .19440026+01 | .40193737-01 | .15247864+02 | .23898760+01 |

$$.10589957-01 = \Delta S/R$$

$$.20674051+01 = P_s/P_{\infty}$$

$$.15396140+01 = \rho_s/\rho_{\infty}$$

$$.13428075+01 = T_s/T_{\infty}$$



TABLE 45. CONICAL FLOWFIELD  $\theta_s = 5.0$  DEG;  $M_\infty = 10.0$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .97820093+00 | .99999988+01 | .87266460-01 | .13825079+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .87266460-01 | .19563652+01 | .87266460-01 | .57150261+01 | .50000000+00 |
| .88139124-01 | .19563666+01 | .86402357-01 | .57554041+01 | .50859395+00 |
| .69011788-01 | .19563710+01 | .85554821-01 | .57966633+01 | .51733839+00 |
| .89884453-01 | .19563780+01 | .84723059-01 | .58388316+01 | .52623813+00 |
| .90757117-01 | .19563876+01 | .83906322-01 | .58819383+01 | .53529828+00 |
| .91629781-01 | .19563997+01 | .83103902-01 | .59260144+01 | .54452419+00 |
| .92502445-01 | .19564141+01 | .82315133-01 | .59710921+01 | .55392142+00 |
| .93375109-01 | .19564309+01 | .81539381-01 | .60172057+01 | .56349587+00 |
| .94247773-01 | .19564498+01 | .80776046-01 | .60643910+01 | .57325367+00 |
| .95120437-01 | .19564708+01 | .80024556-01 | .61126857+01 | .58320130+00 |
| .95993102-01 | .19564938+01 | .79284368-01 | .61621296+01 | .59334554+00 |
| .96865766-01 | .19565188+01 | .78554962-01 | .62127646+01 | .60369352+00 |
| .97738430-01 | .19565457+01 | .77835840-01 | .62646348+01 | .61425275+00 |
| .98611094-01 | .19565745+01 | .77126529-01 | .63177870+01 | .62503115+00 |
| .99483758-01 | .19566050+01 | .76426569-01 | .63722703+01 | .63603707+00 |
| .10035642+00 | .19566372+01 | .75735524-01 | .64281366+01 | .64727925+00 |
| .10122909+00 | .19566712+01 | .75052969-01 | .64854413+01 | .65876701+00 |
| .10210175+00 | .19567068+01 | .74378496-01 | .65442426+01 | .67051020+00 |
| .10297441+00 | .19567440+01 | .73711708-01 | .66044022+01 | .68251915+00 |
| .10384708+00 | .19567827+01 | .73052223-01 | .66665857+01 | .69480488+00 |
| .10471974+00 | .19568231+01 | .72399667-01 | .67302627+01 | .70737901+00 |
| .10559241+00 | .19568649+01 | .71753679-01 | .67957073+01 | .72025395+00 |
| .10646507+00 | .19569082+01 | .71113902-01 | .68629984+01 | .73344284+00 |
| .10733774+00 | .19569531+01 | .70479990-01 | .69322197+01 | .74695963+00 |
| .10821040+00 | .19569993+01 | .69851602-01 | .70034613+01 | .76081926+00 |
| .10908306+00 | .19570471+01 | .69228403-01 | .70768185+01 | .77503756+00 |
| .10995573+00 | .19570962+01 | .68610062-01 | .71523936+01 | .78963151+00 |
| .11082839+00 | .19571469+01 | .67996251-01 | .72302969+01 | .80461922+00 |
| .11170106+00 | .19571989+01 | .67386646-01 | .73106453+01 | .82002012+00 |
| .11257372+00 | .19572523+01 | .66780921-01 | .73935651+01 | .83585498+00 |
| .11344638+00 | .19573072+01 | .66178755-01 | .74791926+01 | .85214622+00 |
| .11431905+00 | .19573636+01 | .65579819-01 | .75676738+01 | .86891781+00 |
| .11519171+00 | .19574213+01 | .64983790-01 | .76591671+01 | .88619572+00 |
| .11606438+00 | .19574806+01 | .64390336-01 | .77538434+01 | .90400791+00 |
| .11693704+00 | .19575413+01 | .63799122-01 | .78518860+01 | .92238468+00 |
| .11780971+00 | .19576035+01 | .63209808-01 | .79535020+01 | .94135883+00 |
| .11868237+00 | .19576673+01 | .62622041-01 | .80589046+01 | .96096602+00 |
| .11955503+00 | .19577326+01 | .62035465-01 | .81683344+01 | .98124504+00 |
| .12042770+00 | .19577995+01 | .61449707-01 | .82820525+01 | .10022383+01 |
| .12130036+00 | .19578680+01 | .60864386-01 | .84003450+01 | .10239921+01 |

TABLE 45. (Concluded)

$$M_{\infty} = .99999988+01$$

$$\Theta_s = .87266460-01$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .12217303+00 | .19579382+01 | .60279100-01 | .65235260+01 | .10465572+01 |
| .12304568+00 | .19580103+01 | .59693432-01 | .86519414+01 | .10699894+01 |
| .12391833+00 | .19580843+01 | .59106946-01 | .87859765+01 | .10943507+01 |
| .12479098+00 | .19581603+01 | .58519170-01 | .89260536+01 | .11197093+01 |
| .12566363+00 | .19582381+01 | .57929596-01 | .90726498+01 | .11461415+01 |
| .12653628+00 | .19583180+01 | .57337688-01 | .92262925+01 | .11737318+01 |
| .12740893+00 | .19583999+01 | .56742884-01 | .93875746+01 | .12025750+01 |
| .12828158+00 | .19584841+01 | .56144550-01 | .95571637+01 | .12327777+01 |
| .12915423+00 | .19585706+01 | .55542009-01 | .97358174+01 | .12644605+01 |
| .12959055+00 | .19586148+01 | .55238931-01 | .98288076+01 | .12808990+01 |
| .13002688+00 | .19586596+01 | .54934513-01 | .99243957+01 | .12977601+01 |
| .13046320+00 | .19587051+01 | .54628653-01 | .10022709+02 | .13150642+01 |
| .13089953+00 | .19587513+01 | .54321237-01 | .10123883+02 | .13328327+01 |
| .13133585+00 | .19587982+01 | .54012150-01 | .10228066+02 | .13510890+01 |
| .13177218+00 | .19588457+01 | .53701261-01 | .10335415+02 | .13698580+01 |
| .13220850+00 | .19588941+01 | .53388441-01 | .10446100+02 | .13891664+01 |
| .13264482+00 | .19589432+01 | .53073544-01 | .10560306+02 | .14090435+01 |
| .13308115+00 | .19589932+01 | .52756425-01 | .10678231+02 | .14295205+01 |
| .13351747+00 | .19590440+01 | .52436918-01 | .10800092+02 | .14506312+01 |
| .13395380+00 | .19590957+01 | .52114848-01 | .10926123+02 | .14724131+01 |
| .13439012+00 | .19591483+01 | .51790034-01 | .11056582+02 | .14949059+01 |
| .13482645+00 | .19592019+01 | .51462272-01 | .11191748+02 | .15181538+01 |
| .13526277+00 | .19592565+01 | .51131342-01 | .11331928+02 | .15422049+01 |
| .13569910+00 | .19593122+01 | .50797010-01 | .11477460+02 | .15671110+01 |
| .13613542+00 | .19593690+01 | .50459016-01 | .11628716+02 | .15929328+01 |
| .13657175+00 | .19594270+01 | .50117088-01 | .11786106+02 | .16197319+01 |
| .13700807+00 | .19594863+01 | .49770914-01 | .11950088+02 | .16475805+01 |
| .13744440+00 | .19595468+01 | .49420154-01 | .12121172+02 | .16765578+01 |
| .13788072+00 | .19596088+01 | .49064433-01 | .12299926+02 | .17067521+01 |
| .13825079+00 | .19596626+01 | .48758538-01 | .12458023+02 | .17333891+01 |

$$.33311844-01 = \Delta S/R$$

$$.25800821+01 = P_s/P_{\infty}$$

$$.17425617+01 = \rho_s/\rho_{\infty}$$

$$.14806261+01 = T_s/T_{\infty}$$



TABLE 46. CONICAL FLOWFIELD  $\theta_s = 5.0$  DEG;  $M_\infty = 12.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .98403282+00 | .12500000+02 | .87266460-01 | .12604876+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .87266460-01 | .19680287+01 | .87266460-01 | .57150261+01 | .50000000+00 |
| .88139124-01 | .19680302+01 | .86402335-01 | .57626829+01 | .50923716+00 |
| .89011788-01 | .19680346+01 | .85554652-01 | .58115665+01 | .51866846+00 |
| .89884453-01 | .19680416+01 | .84722498-01 | .58617240+01 | .52830135+00 |
| .90757117-01 | .19680513+01 | .83905021-01 | .59132059+01 | .53814386+00 |
| .91629781-01 | .19680635+01 | .83101412-01 | .59660660+01 | .54820441+00 |
| .92502445-01 | .19680781+01 | .82310912-01 | .60203609+01 | .55849195+00 |
| .93375109-01 | .19680949+01 | .81532801-01 | .60761512+01 | .56901596+00 |
| .94247773-01 | .19681140+01 | .80766392-01 | .61335006+01 | .57978646+00 |
| .95120437-01 | .19681353+01 | .80011036-01 | .61924782+01 | .59081417+00 |
| .95993102-01 | .19681587+01 | .79266110-01 | .62531563+01 | .60211041+00 |
| .96865766-01 | .19681840+01 | .78531015-01 | .63156132+01 | .61368730+00 |
| .97738430-01 | .19682114+01 | .77805180-01 | .63799316+01 | .62555769+00 |
| .98611094-01 | .19682407+01 | .77088053-01 | .64462002+01 | .63773532+00 |
| .99483758-01 | .19682718+01 | .76379097-01 | .65145144+01 | .65023491+00 |
| .10035642+00 | .19683048+01 | .75677795-01 | .65849766+01 | .66307219+00 |
| .10122909+00 | .19683396+01 | .74983643-01 | .66576960+01 | .67626401+00 |
| .10210175+00 | .19683762+01 | .74296145-01 | .67327909+01 | .68982849+00 |
| .10297441+00 | .19684146+01 | .73614817-01 | .68103884+01 | .70378508+00 |
| .10384708+00 | .19684547+01 | .72939184-01 | .68906254+01 | .71815474+00 |
| .10471974+00 | .19684965+01 | .72268774-01 | .69736505+01 | .73296010+00 |
| .10559241+00 | .19685401+01 | .71603116-01 | .70596241+01 | .74822560+00 |
| .10646507+00 | .19685854+01 | .70941744-01 | .71487213+01 | .76397780+00 |
| .10733774+00 | .19686324+01 | .70284190-01 | .72411315+01 | .78024546+00 |
| .10821040+00 | .19686811+01 | .69629981-01 | .73370622+01 | .79705991+00 |
| .10864673+00 | .19687061+01 | .69303980-01 | .73864172+01 | .80568269+00 |
| .10908306+00 | .19687316+01 | .68978638-01 | .74367390+01 | .81445526+00 |
| .10951940+00 | .19687575+01 | .68653890-01 | .74880588+01 | .82338231+00 |
| .10995573+00 | .19687838+01 | .68329674-01 | .75404102+01 | .83246890+00 |
| .11039206+00 | .19688106+01 | .68005931-01 | .75938277+01 | .84172022+00 |
| .11082839+00 | .19688379+01 | .67682593-01 | .76483476+01 | .85114174+00 |
| .11126472+00 | .19688656+01 | .67359598-01 | .77040089+01 | .86073928+00 |
| .11170106+00 | .19688938+01 | .67036878-01 | .77608519+01 | .87051887+00 |
| .11213739+00 | .19689224+01 | .66714368-01 | .78189188+01 | .88048686+00 |
| .11257372+00 | .19689515+01 | .66391999-01 | .78782540+01 | .89064989+00 |
| .11301005+00 | .19689811+01 | .66069700-01 | .79389051+01 | .90101504+00 |
| .11344638+00 | .19690111+01 | .65747400-01 | .80009215+01 | .91158970+00 |
| .11388272+00 | .19690417+01 | .65425025-01 | .80643557+01 | .92238171+00 |
| .11431904+00 | .19690729+01 | .65102502-01 | .81292623+01 | .93339916+00 |
| .11475537+00 | .19691046+01 | .64779749-01 | .81957012+01 | .94465096+00 |

TABLE 46. (Concluded)

$$M_{\infty} = .12500000+02$$

$$\Theta_s = .87266460-01$$

| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .11519169+00 | .19691369+01 | .64456688-01 | .82637347+01 | .95614637+00 |
| .11562802+00 | .19691696+01 | .64133233-01 | .83334281+01 | .96789512+00 |
| .11606434+00 | .19692029+01 | .63809301-01 | .84048517+01 | .97990759+00 |
| .11650066+00 | .19692368+01 | .63484802-01 | .84780793+01 | .99219473+00 |
| .11693699+00 | .19692712+01 | .63159641-01 | .85531907+01 | .10047683+01 |
| .11737331+00 | .19693062+01 | .62833721-01 | .86302688+01 | .10176407+01 |
| .11780964+00 | .19693417+01 | .62506947-01 | .87094039+01 | .10308251+01 |
| .11824596+00 | .19693779+01 | .62179209-01 | .87906911+01 | .10443356+01 |
| .11868229+00 | .19694147+01 | .61850399-01 | .88742338+01 | .10581874+01 |
| .11911861+00 | .19694521+01 | .61520400-01 | .89601408+01 | .10723965+01 |
| .11955494+00 | .19694902+01 | .61189091-01 | .90485300+01 | .10869802+01 |
| .11999126+00 | .19695289+01 | .60856346-01 | .91395273+01 | .11019571+01 |
| .12042759+00 | .19695683+01 | .60522026-01 | .92332691+01 | .11173471+01 |
| .12086391+00 | .19696084+01 | .60185991-01 | .93299017+01 | .11331716+01 |
| .12130024+00 | .19696493+01 | .59848086-01 | .94295834+01 | .11494538+01 |
| .12173656+00 | .19696909+01 | .59508153-01 | .95324856+01 | .11662187+01 |
| .12217288+00 | .19697334+01 | .59166020-01 | .96387947+01 | .11834936+01 |
| .12260921+00 | .19697766+01 | .58821501-01 | .97487119+01 | .12013076+01 |
| .12304553+00 | .19698208+01 | .58474401-01 | .98624581+01 | .12196931+01 |
| .12348186+00 | .19698658+01 | .58124500-01 | .99802744+01 | .12386850+01 |
| .12391818+00 | .19699117+01 | .57771577-01 | .10102423+02 | .12583213+01 |
| .12435451+00 | .19699587+01 | .57415376-01 | .10229195+02 | .12786442+01 |
| .12479083+00 | .19700067+01 | .57055632-01 | .10360909+02 | .12997000+01 |
| .12522716+00 | .19700558+01 | .56692049-01 | .10497917+02 | .13215395+01 |
| .12566348+00 | .19701059+01 | .56324303-01 | .10640613+02 | .13442195+01 |
| .12604876+00 | .19701513+01 | .55995835-01 | .10771690+02 | .13649950+01 |

$$.86238235-01 = \Delta S/R$$

$$.33645023+01 = P_s/P_{\infty}$$

$$.20006200+01 = \rho_s/\rho_{\infty}$$

$$.16817298+01 = T_s/T_{\infty}$$

TABLE 47. CONICAL FLOWFIELD  $\theta_s = 5.0$  DEG;  $M_\infty = 15.0$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .98730528+00 | .15000015+02 | .87266460-01 | .11887137+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .87266460-01 | .19745735+01 | .87266460-01 | .57150261+01 | .50000000+00 |
| .88139124-01 | .19745750+01 | .86402314-01 | .57688094+01 | .50977855+00 |
| .89011788-01 | .19745794+01 | .85554488-01 | .58241556+01 | .51979200+00 |
| .89884453-01 | .19745865+01 | .84721957-01 | .58811343+01 | .53005075+00 |
| .90757117-01 | .19745962+01 | .83903764-01 | .59398201+01 | .54056594+00 |
| .91629781-01 | .19746084+01 | .83099005-01 | .60002934+01 | .55134948+00 |
| .92502445-01 | .19746231+01 | .82306826-01 | .60626398+01 | .56241405+00 |
| .93375109-01 | .19746401+01 | .81526420-01 | .61269516+01 | .57377329+00 |
| .94247773-01 | .19746594+01 | .80757015-01 | .61933275+01 | .58554417+00 |
| .95120437-01 | .19746808+01 | .79997877-01 | .62618743+01 | .59743513+00 |
| .95993102-01 | .19747044+01 | .79248297-01 | .63327060+01 | .60977017+00 |
| .96865766-01 | .19747301+01 | .78507595-01 | .64059466+01 | .62246498+00 |
| .97738430-01 | .19747579+01 | .77775110-01 | .64817294+01 | .63553905+00 |
| .98174762-01 | .19747725+01 | .77411749-01 | .65206190+01 | .64222484+00 |
| .98611094-01 | .19747876+01 | .77050203-01 | .65601997+01 | .64901352+00 |
| .99047426-01 | .19748032+01 | .76690393-01 | .66004910+01 | .65590794+00 |
| .99483758-01 | .19748193+01 | .76332242-01 | .66415144+01 | .66291120+00 |
| .99920090-01 | .19748359+01 | .75975675-01 | .66832912+01 | .67002638+00 |
| .10035642+00 | .19748530+01 | .75620615-01 | .67258444+01 | .67725684+00 |
| .10079275+00 | .19748705+01 | .75266985-01 | .67691978+01 | .68460599+00 |
| .10122909+00 | .19748886+01 | .74914712-01 | .68133762+01 | .69207743+00 |
| .10166542+00 | .19749071+01 | .74563716-01 | .68584054+01 | .69967489+00 |
| .10210175+00 | .19749261+01 | .74213925-01 | .69043126+01 | .70740227+00 |
| .10253808+00 | .19749456+01 | .73865263-01 | .69511265+01 | .71526370+00 |
| .10297441+00 | .19749656+01 | .73517654-01 | .69988765+01 | .72326343+00 |
| .10341075+00 | .19749860+01 | .73171021-01 | .70475941+01 | .73140597+00 |
| .10384708+00 | .19750069+01 | .72825289-01 | .70973121+01 | .73969604+00 |
| .10428341+00 | .19750284+01 | .72480381-01 | .71480649+01 | .74813855+00 |
| .10471974+00 | .19750503+01 | .72136218-01 | .71998888+01 | .75673870+00 |
| .10515608+00 | .19750727+01 | .71792722-01 | .72528216+01 | .76550191+00 |
| .10559241+00 | .19750955+01 | .71449813-01 | .73069038+01 | .77443393+00 |
| .10602874+00 | .19751187+01 | .71107412-01 | .73621771+01 | .78354076+00 |
| .10646507+00 | .19751428+01 | .70765437-01 | .74186863+01 | .79282874+00 |
| .10690140+00 | .19751671+01 | .70423801-01 | .74764780+01 | .80230452+00 |
| .10733774+00 | .19751920+01 | .70082423-01 | .75356020+01 | .81197520+00 |
| .10777407+00 | .19752174+01 | .69741214-01 | .75961103+01 | .82184814+00 |
| .10821040+00 | .19752433+01 | .69400085-01 | .76580589+01 | .83193130+00 |
| .10864673+00 | .19752698+01 | .69058946-01 | .77215059+01 | .84223291+00 |
| .10908306+00 | .19752967+01 | .68717702-01 | .77865144+01 | .85276189+00 |
| .10951939+00 | .19753245+01 | .68376260-01 | .78531485+01 | .86352729+00 |

TABLE 47. (Concluded)

$$M_{\infty} = .15000015+02$$

$$\Theta_s = .87266460-01$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .10995571+00 | .19753527+01 | .68034514-01 | .79214808+01 | .87453937+00 |
| .11039204+00 | .19753815+01 | .67692363-01 | .79915858+01 | .88580862+00 |
| .11082836+00 | .19754108+01 | .67349701-01 | .80635427+01 | .89734624+00 |
| .11126469+00 | .19754408+01 | .67006414-01 | .81374376+01 | .90916429+00 |
| .11170101+00 | .19754713+01 | .66662389-01 | .82133602+01 | .92127543+00 |
| .11213734+00 | .19755025+01 | .66317504-01 | .82914088+01 | .93369342+00 |
| .11257366+00 | .19755343+01 | .65971632-01 | .83716869+01 | .94643280+00 |
| .11300999+00 | .19755667+01 | .65624641-01 | .84543073+01 | .95950932+00 |
| .11344631+00 | .19755998+01 | .65276391-01 | .85393897+01 | .97293976+00 |
| .11388263+00 | .19756335+01 | .64926738-01 | .86270635+01 | .98674217+00 |
| .11431896+00 | .19756680+01 | .64575524-01 | .87174692+01 | .10009362+01 |
| .11475528+00 | .19757032+01 | .64222582-01 | .88107578+01 | .10155427+01 |
| .11519161+00 | .19757391+01 | .63867742-01 | .89070929+01 | .10305847+01 |
| .11562793+00 | .19757758+01 | .63510817-01 | .90066524+01 | .10460867+01 |
| .11606426+00 | .19758133+01 | .63151608-01 | .91096307+01 | .10620758+01 |
| .11650058+00 | .19758516+01 | .62789901-01 | .92162384+01 | .10785812+01 |
| .11693691+00 | .19758908+01 | .62425471-01 | .93267064+01 | .10956347+01 |
| .11737323+00 | .19759309+01 | .62058067-01 | .94412887+01 | .11132716+01 |
| .11780956+00 | .19759719+01 | .61687423-01 | .95602641+01 | .11315302+01 |
| .11824588+00 | .19760140+01 | .61313247-01 | .96839408+01 | .11504530+01 |
| .11868221+00 | .19760570+01 | .60935227-01 | .98126594+01 | .11700869+01 |
| .11887137+00 | .19760760+01 | .60770061-01 | .98701258+01 | .11788330+01 |

$$.16605660+00 = \Delta S/R$$

$$.43119101+01 = P_s/P_{\infty}$$

$$.22487768+01 = \rho_s/\rho_{\infty}$$

$$.19174469+01 = T_s/T_{\infty}$$

TABLE 48. CONICAL FLOWFIELD  $\theta_s = 5.0$  DEG;  $M_\infty = 17.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .98932249+00 | .17499994+02 | .87266460-01 | .11430023+00 |              |
| $\theta$     | $M_1$        | $\psi_1$     | $x$          | $r$          |
| .87266460-01 | .19786079+01 | .87266460-01 | .57150261+01 | .50000000+00 |
| .87702792-01 | .19786083+01 | .86832278-01 | .57442442+01 | .50508190+00 |
| .88139124-01 | .19786094+01 | .86402295-01 | .57739202+01 | .51023018+00 |
| .88575456-01 | .19786112+01 | .85976362-01 | .58040648+01 | .51544637+00 |
| .89011788-01 | .19786137+01 | .85554337-01 | .58346894+01 | .52073213+00 |
| .89448120-01 | .19786170+01 | .85136080-01 | .58658060+01 | .52608912+00 |
| .89884453-01 | .19786208+01 | .84721458-01 | .58974289+01 | .53151916+00 |
| .90320785-01 | .19786254+01 | .84310342-01 | .59295648+01 | .53702405+00 |
| .90757117-01 | .19786306+01 | .83902604-01 | .59622331+01 | .54260568+00 |
| .91193449-01 | .19786364+01 | .83498123-01 | .59954456+01 | .54826603+00 |
| .91629781-01 | .19786429+01 | .83096779-01 | .60292167+01 | .55400715+00 |
| .92066113-01 | .19786499+01 | .82698457-01 | .60635613+01 | .55983114+00 |
| .92502445-01 | .19786576+01 | .82303044-01 | .60984949+01 | .56574023+00 |
| .92938777-01 | .19786659+01 | .81910429-01 | .61340336+01 | .57173666+00 |
| .93375109-01 | .19786747+01 | .81520504-01 | .61701944+01 | .57782287+00 |
| .93811441-01 | .19786841+01 | .81133164-01 | .62069945+01 | .58400128+00 |
| .94247773-01 | .19786941+01 | .80748306-01 | .62444525+01 | .59027450+00 |
| .94684105-01 | .19787046+01 | .80366827-01 | .62825870+01 | .59664517+00 |
| .95120437-01 | .19787157+01 | .79985630-01 | .63214183+01 | .60311613+00 |
| .95556770-01 | .19787274+01 | .79607613-01 | .63609667+01 | .60969026+00 |
| .95993102-01 | .19787395+01 | .79231683-01 | .64012539+01 | .61637058+00 |
| .96429434-01 | .19787522+01 | .78857741-01 | .64423026+01 | .62314029+00 |
| .96865766-01 | .19787655+01 | .78485696-01 | .64841362+01 | .63006266+00 |
| .97302098-01 | .19787793+01 | .78115451-01 | .65267793+01 | .63708113+00 |
| .97738430-01 | .19787935+01 | .77746917-01 | .65702576+01 | .64421934+00 |
| .98174762-01 | .19788084+01 | .77380000-01 | .66145989+01 | .65148105+00 |
| .98611094-01 | .19788237+01 | .77014608-01 | .66598307+01 | .65887021+00 |
| .99047426-01 | .19788395+01 | .76650651-01 | .67059832+01 | .66639097+00 |
| .99483758-01 | .19788559+01 | .76288038-01 | .67530870+01 | .67404763+00 |
| .99920090-01 | .19788728+01 | .75926677-01 | .68011752+01 | .68184473+00 |
| .10035642+00 | .19788902+01 | .75566479-01 | .68502820+01 | .68978705+00 |
| .10079275+00 | .19789081+01 | .75207349-01 | .69004434+01 | .69787958+00 |
| .10122909+00 | .19789265+01 | .74849198-01 | .69516981+01 | .70612765+00 |
| .10166542+00 | .19789455+01 | .74491932-01 | .70040857+01 | .71453678+00 |
| .10210175+00 | .19789649+01 | .74135459-01 | .70576485+01 | .72311276+00 |
| .10253808+00 | .19789849+01 | .73779683-01 | .71124311+01 | .73186178+00 |
| .10297441+00 | .19790054+01 | .73424508-01 | .71684804+01 | .74079029+00 |
| .10341075+00 | .19790264+01 | .73069837-01 | .72258468+01 | .74990521+00 |
| .10384708+00 | .19790480+01 | .72715572-01 | .72845827+01 | .75921375+00 |
| .10428341+00 | .19790701+01 | .72361612-01 | .73447435+01 | .76872354+00 |

TABLE 48. (Concluded)

$$M_{\infty} = .17499994+02$$

$$\Theta_s = .87266460-01$$

| $\Theta$     | $M_1$        | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .10471974+00 | .19790927+01 | .72007852-01 | .74063892+01 | .77844276+00 |
| .10515608+00 | .19791159+01 | .71654188-01 | .74695816+01 | .78837992+00 |
| .10559241+00 | .19791397+01 | .71300511-01 | .75343883+01 | .79854424+00 |
| .10602874+00 | .19791640+01 | .70946708-01 | .76008802+01 | .80894542+00 |
| .10646506+00 | .19791890+01 | .70592667-01 | .76691322+01 | .81959361+00 |
| .10690139+00 | .19792147+01 | .70238265-01 | .77392269+01 | .83050012+00 |
| .10733771+00 | .19792409+01 | .69883380-01 | .78112504+01 | .84167664+00 |
| .10777404+00 | .19792677+01 | .69527883-01 | .78852958+01 | .85313584+00 |
| .10821036+00 | .19792952+01 | .69171639-01 | .79614614+01 | .86489105+00 |
| .10864669+00 | .19793233+01 | .68814510-01 | .80398538+01 | .87695674+00 |
| .10908301+00 | .19793520+01 | .68456350-01 | .81205888+01 | .88934854+00 |
| .10951934+00 | .19793814+01 | .68097004-01 | .82037886+01 | .90208303+00 |
| .10995566+00 | .19794114+01 | .67736309-01 | .82895867+01 | .91517818+00 |
| .11039199+00 | .19794422+01 | .67374094-01 | .83781266+01 | .92865339+00 |
| .11082831+00 | .19794736+01 | .67010180-01 | .84695652+01 | .94252975+00 |
| .11126463+00 | .19795059+01 | .66644371-01 | .85640703+01 | .95682986+00 |
| .11170096+00 | .19795389+01 | .66276466-01 | .86618282+01 | .97157869+00 |
| .11213728+00 | .19795727+01 | .65906243-01 | .87630395+01 | .98680317+00 |
| .11257361+00 | .19796073+01 | .65533466-01 | .88679243+01 | .10025328+01 |
| .11300993+00 | .19796428+01 | .65157882-01 | .89767246+01 | .10187998+01 |
| .11344626+00 | .19796792+01 | .64779217-01 | .90897050+01 | .10356397+01 |
| .11388258+00 | .19797165+01 | .64397174+01 | .92071604+01 | .10530917+01 |
| .11430023+00 | .19797532+01 | .64028020-01 | .93240799+01 | .10704100+01 |

$$.26843661+00 = \Delta S/R$$

$$.54244491+01 = P_s/P_{\infty}$$

$$.24772564+01 = \rho_s/\rho_{\infty}$$

$$.21897074+01 = T_s/T_{\infty}$$

TABLE 49. CONICAL FLOWFIELD  $\theta_s = 5.0$  DEG;  $M_\infty = 20.0$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .99065224+00 | .19999969+02 | .87266460-01 | .11121585+00 |              |
| $e$          | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .87266460-01 | .19812673+01 | .87266460-01 | .57150261+01 | .50000000+00 |
| .87702792-01 | .19812677+01 | .86832277-01 | .57463317+01 | .50526544+00 |
| .88139124-01 | .19812688+01 | .86402277-01 | .57781628+01 | .51060509+00 |
| .88575456-01 | .19812707+01 | .85976304-01 | .58105328+01 | .51602079+00 |
| .89011788-01 | .19812732+01 | .85554201-01 | .58434559+01 | .52151451+00 |
| .89448120-01 | .19812764+01 | .85135818-01 | .58769470+01 | .52708834+00 |
| .89884453-01 | .19812803+01 | .84721011-01 | .59110217+01 | .53274442+00 |
| .90320785-01 | .19812849+01 | .84309638-01 | .59456961+01 | .53848501+00 |
| .90757117-01 | .19812901+01 | .83901564-01 | .59809868+01 | .54431240+00 |
| .91193449-01 | .19812959+01 | .83496654-01 | .60169114+01 | .55022901+00 |
| .91629781-01 | .19813024+01 | .83094781-01 | .60534881+01 | .55623738+00 |
| .92066113-01 | .19813095+01 | .82695819-01 | .60907357+01 | .56234007+00 |
| .92502445-01 | .19813172+01 | .82299644-01 | .61286744+01 | .56853990+00 |
| .92938777-01 | .19813255+01 | .81906137-01 | .61673247+01 | .57483964+00 |
| .93375109-01 | .19813343+01 | .81519180-01 | .62067083+01 | .58124231+00 |
| .93811441-01 | .19813438+01 | .81126656-01 | .62468478+01 | .58775098+00 |
| .94247773-01 | .19813538+01 | .80740455-01 | .62877671+01 | .59436893+00 |
| .94684105-01 | .19813644+01 | .80356462-01 | .63294905+01 | .60109951+00 |
| .95120437-01 | .19813756+01 | .79974568-01 | .63720443+01 | .60794628+00 |
| .95556770-01 | .19813873+01 | .79594666-01 | .64154553+01 | .61491292+00 |
| .95993102-01 | .19813996+01 | .79216646-01 | .64597524+01 | .62200335+00 |
| .96429434-01 | .19814124+01 | .78840403-01 | .65049655+01 | .62922163+00 |
| .96865766-01 | .19814257+01 | .78465831-01 | .65511256+01 | .63657202+00 |
| .97302098-01 | .19814396+01 | .78092824-01 | .65982658+01 | .64405895+00 |
| .97738430-01 | .19814541+01 | .77721278-01 | .66464209+01 | .65168719+00 |
| .98174762-01 | .19814691+01 | .77351088-01 | .66956273+01 | .65946165+00 |
| .98611094-01 | .19814846+01 | .76982149-01 | .67459238+01 | .66738757+00 |
| .99047426-01 | .19815007+01 | .76614356-01 | .67977350+01 | .67547039+00 |
| .99483758-01 | .19815173+01 | .76247603-01 | .68499509+01 | .68371592+00 |
| .99920090-01 | .19815344+01 | .75881783-01 | .69037691+01 | .69213016+00 |
| .10035642+00 | .19815521+01 | .75516791-01 | .69588536+01 | .70071962+00 |
| .10079275+00 | .19815704+01 | .75152515-01 | .70152547+01 | .70949107+00 |
| .10122909+00 | .19815891+01 | .74788847-01 | .70730267+01 | .71840176+00 |
| .10166542+00 | .19816085+01 | .74425675-01 | .71322255+01 | .72746092+00 |
| .10210175+00 | .19816283+01 | .74062884-01 | .71929116+01 | .73667155+00 |
| .10253808+00 | .19816488+01 | .73700357-01 | .72551495+01 | .74654736+00 |
| .10297441+00 | .19816698+01 | .73337977-01 | .73190067+01 | .75634566+00 |
| .10341075+00 | .19816914+01 | .72975618-01 | .73845565+01 | .76637626+00 |
| .10384708+00 | .19817135+01 | .72613156-01 | .74518762+01 | .77664942+00 |
| .10428340+00 | .19817365+01 | .72250461-01 | .75210477+01 | .78717603+00 |



TABLE 49. (Concluded)

$$M_{\infty} = .19999967+02$$

$$\Theta_s = .87266460-01$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .10471973+00 | .19817600+01 | .71867395-01 | .75921614+01 | .79796810+00 |
| .10515605+00 | .19817842+01 | .71523825-01 | .76653123+01 | .80903822+00 |
| .10559238+00 | .19818089+01 | .71159597-01 | .77406028+01 | .82039999+00 |
| .10602870+00 | .19818343+01 | .70794562-01 | .78181422+01 | .83206785+00 |
| .10646503+00 | .19818603+01 | .70428563-01 | .78980490+01 | .84405746+00 |
| .10690135+00 | .19818870+01 | .70061434-01 | .79804508+01 | .85638568+00 |
| .10733768+00 | .19819144+01 | .69692996-01 | .80654851+01 | .86907061+00 |
| .10777400+00 | .19819425+01 | .69323066-01 | .81533018+01 | .88213198+00 |
| .10821033+00 | .19819714+01 | .68951445-01 | .82440628+01 | .89559106+00 |
| .10864665+00 | .19820009+01 | .68577926-01 | .83379455+01 | .90947114+00 |
| .10908297+00 | .19820312+01 | .68202286-01 | .84351417+01 | .92379735+00 |
| .10951930+00 | .19820624+01 | .67824285-01 | .85358623+01 | .93859731+00 |
| .10995562+00 | .19820943+01 | .67443669-01 | .86403390+01 | .95390125+00 |
| .11039195+00 | .19821272+01 | .67060159-01 | .87488260+01 | .96974234+00 |
| .11082827+00 | .19821609+01 | .66673458-01 | .88616041+01 | .98615719+00 |
| .11121585+00 | .19821917+01 | .66327023-01 | .89656316+01 | .10012519+01 |

$$.38779309+00 = \Delta S/R$$

$$.67037899+01 = P_s/P_{\infty}$$

$$.26817220+01 = \rho_s/\rho_{\infty}$$

$$.24998080+01 = T_s/T_{\infty}$$



TABLE 50. CONICAL FLOWFIELD  $\theta_s = 5.0$  DEG;  $M_\infty = 22.5$

| $\frac{u}{s}$ | $\frac{M_\infty}{s}$ | $\frac{\theta_s}{s}$ | $\frac{\theta_w}{s}$ |              |
|---------------|----------------------|----------------------|----------------------|--------------|
| .99157444+00  | .22499973+02         | .87266460+01         | .10904035+00         |              |
| $\theta$      | $M_1^*$              | $\psi_1$             | $x$                  | $r$          |
| .87266460+01  | .19831117+01         | .87266460+01         | .57150261+01         | .50000000+00 |
| .87704792+01  | .19831121+01         | .86832274+01         | .57480608+01         | .50541748+00 |
| .88139124+01  | .19831132+01         | .86402263+01         | .57816807+01         | .51091596+00 |
| .88575456+01  | .19831150+01         | .85976254+01         | .58159015+01         | .51649757+00 |
| .89011788+01  | .19831176+01         | .85554083+01         | .58507402+01         | .52216461+00 |
| .89448120+01  | .19831208+01         | .85135589+01         | .58862146+01         | .52791952+00 |
| .89884453+01  | .19831247+01         | .84720618+01         | .59223433+01         | .53376481+00 |
| .90320785+01  | .19831293+01         | .84309019+01         | .59591452+01         | .53970306+00 |
| .90757117+01  | .19831345+01         | .83900647+01         | .59966406+01         | .54573701+00 |
| .91193449+01  | .19831404+01         | .83495361+01         | .60348505+01         | .55186950+00 |
| .91629781+01  | .19831468+01         | .83093021+01         | .60737969+01         | .55810349+00 |
| .92066113+01  | .19831539+01         | .82693493+01         | .61135027+01         | .56444208+00 |
| .92502445+01  | .19831616+01         | .82296646+01         | .61539921+01         | .57088854+00 |
| .92938777+01  | .19831700+01         | .81902350+01         | .61952900+01         | .57744621+00 |
| .93375109+01  | .19831769+01         | .81510478+01         | .62374232+01         | .58411867+00 |
| .93811441+01  | .19831844+01         | .81120906+01         | .62804191+01         | .59090962+00 |
| .94247773+01  | .19831925+01         | .80733512+01         | .63243067+01         | .59782294+00 |
| .94684105+01  | .19832019+01         | .80346173+01         | .63691168+01         | .60486273+00 |
| .95120437+01  | .19832203+01         | .79964771+01         | .64148813+01         | .61203329+00 |
| .95556770+01  | .19832321+01         | .79583187+01         | .64616339+01         | .61933908+00 |
| .95993102+01  | .19832445+01         | .79203302+01         | .65094101+01         | .62678485+00 |
| .96429434+01  | .19832574+01         | .78825001+01         | .65582473+01         | .63437555+00 |
| .96865766+01  | .19832709+01         | .78448165+01         | .66081850+01         | .64211646+00 |
| .97302098+01  | .19832849+01         | .78072678+01         | .66592645+01         | .65001306+00 |
| .97738430+01  | .19832994+01         | .77698424+01         | .67115299+01         | .65807119+00 |
| .98174762+01  | .19833146+01         | .77325284+01         | .67650277+01         | .66629699+00 |
| .98611094+01  | .19833303+01         | .76953141+01         | .68198073+01         | .67469701+00 |
| .99047426+01  | .19833465+01         | .76581874+01         | .68759204+01         | .68327808+00 |
| .99483758+01  | .19833633+01         | .76211363+01         | .69334227+01         | .69204751+00 |
| .99920090+01  | .19833807+01         | .75841486+01         | .69923723+01         | .70101299+00 |
| 1.00356422+00 | .19833987+01         | .75472120+01         | .70528319+01         | .71018275+00 |
| 1.00792754+00 | .19834172+01         | .75103136+01         | .71148677+01         | .71956547+00 |
| 1.01229086+00 | .19834363+01         | .74734404+01         | .71785509+01         | .72917052+00 |
| 1.01665420+00 | .19834560+01         | .74365742+01         | .72434561+01         | .73900767+00 |
| 1.02101752+00 | .19834762+01         | .73997163+01         | .73111636+01         | .74908742+00 |
| 1.02538084+00 | .19834971+01         | .73628378+01         | .73802606+01         | .75942116+00 |
| 1.02974416+00 | .19835188+01         | .73259268+01         | .74513382+01         | .77002074+00 |
| 1.03410738+00 | .19835410+01         | .72897742+01         | .75244972+01         | .78089932+00 |
| 1.03847060+00 | .19835639+01         | .72549585+01         | .75996440+01         | .79207074+00 |
| 1.04283382+00 | .19835875+01         | .72214865+01         | .76774942+01         | .80355002+00 |
| 1.04719714+00 | .19836116+01         | .71776775+01         | .77575709+01         | .81535315+00 |
| 1.05156036+00 | .19836365+01         | .71403774+01         | .78402086+01         | .82749754+00 |
| 1.05592368+00 | .19836621+01         | .71029454+01         | .79255527+01         | .84000020+00 |
| 1.06028680+00 | .19836884+01         | .70653616+01         | .80137607+01         | .85288692+00 |
| 1.06465002+00 | .19837154+01         | .70276049+01         | .81050047+01         | .86617446+00 |
| 1.06901334+00 | .19837431+01         | .69896528+01         | .81994714+01         | .87988868+00 |
| 1.07337656+00 | .19837716+01         | .69514809+01         | .82973663+01         | .89405604+00 |
| 1.07773978+00 | .19838010+01         | .69130634+01         | .83989128+01         | .90870523+00 |
| 1.08210300+00 | .19838311+01         | .68743725+01         | .85043590+01         | .92386806+00 |
| 1.08646632+00 | .19838622+01         | .68353779+01         | .86139783+01         | .93957955+00 |
| 1.09082954+00 | .19838940+01         | .67959902+01         | .87267257+01         | .95485900+00 |

$$.5186240+00 = AS/R$$

$$.81506431+01 = P_1/P_\infty$$

$$.28613141+01 = \rho_1/\rho_\infty$$

$$.38485628+01 = T_1/T_\infty$$

TABLE 51. CONICAL FLOWFIELD  $\theta_s = 5.0$  DEG;  $M_\infty = 25.0$

| $\frac{u_s}{u_\infty}$ | $\frac{M_\infty}{M^*}$ | $\frac{\theta_s}{\theta_\infty}$ | $\frac{\theta_w}{\theta_\infty}$ |              |
|------------------------|------------------------|----------------------------------|----------------------------------|--------------|
| .99223962+00           | .24999933+02           | .87266460-01                     | .10745092+00                     |              |
| $\theta$               | $M^*_1$                | $\psi_1$                         | $x$                              | $r$          |
| .87266460-01           | .19844420+01           | .87266460-01                     | .57150261+01                     | .50000000+00 |
| .67702192-01           | .19844424+01           | .86832273-01                     | .57494949+01                     | .50554358+00 |
| .88139124-01           | .19844435+01           | .86402250-01                     | .57646008+01                     | .51117401+00 |
| .88575456-01           | .19844453+01           | .85976209-01                     | .58203619+01                     | .51689368+00 |
| .89011768-01           | .19844479+01           | .85553960-01                     | .58567975+01                     | .52270522+00 |
| .89448120-01           | .19844511+01           | .85135389-01                     | .58939281+01                     | .52861133+00 |
| .89884453-01           | .19844550+01           | .84720275-01                     | .59317749+01                     | .53461485+00 |
| .90320765-01           | .19844596+01           | .84308481-01                     | .59703600+01                     | .54071875+00 |
| .90757117-01           | .19844648+01           | .83899851-01                     | .60097067+01                     | .54692612+00 |
| .91193449-01           | .19844707+01           | .83494236-01                     | .60498394+01                     | .55324019+00 |
| .91629761-01           | .19844772+01           | .83091489-01                     | .60907832+01                     | .55966432+00 |
| .92066113-01           | .19844843+01           | .82691468-01                     | .61325653+01                     | .56620207+00 |
| .92502445-01           | .19844921+01           | .82294033-01                     | .61752136+01                     | .57285720+00 |
| .92938777-01           | .19845004+01           | .81899048-01                     | .62187575+01                     | .57963355+00 |
| .93375109-01           | .19845093+01           | .81506376-01                     | .62632278+01                     | .58653522+00 |
| .93811441-01           | .19845189+01           | .81115886-01                     | .63086572+01                     | .59356647+00 |
| .94247773-01           | .19845290+01           | .80727446-01                     | .63550799+01                     | .60073186+00 |
| .94684105-01           | .19845397+01           | .80340927-01                     | .64025519+01                     | .60803610+00 |
| .95120437-01           | .19845510+01           | .79956199-01                     | .64510515+01                     | .61548422+00 |
| .95556770-01           | .19845628+01           | .79573135-01                     | .65006783+01                     | .62308143+00 |
| .95993102-01           | .19845752+01           | .79191608-01                     | .65514550+01                     | .63083331+00 |
| .96429434-01           | .19845882+01           | .78811491-01                     | .66034262+01                     | .63874568+00 |
| .96865766-01           | .19846018+01           | .78432655-01                     | .66566393+01                     | .64682477+00 |
| .97302098-01           | .19846159+01           | .78054973-01                     | .67111444+01                     | .65507708+00 |
| .97738430-01           | .19846306+01           | .77678317-01                     | .67666951+01                     | .66350960+00 |
| .98174762-01           | .19846459+01           | .77302556-01                     | .68242474+01                     | .67212962+00 |
| .98611094-01           | .19846617+01           | .76927560-01                     | .68829616+01                     | .68094499+00 |
| .99047426-01           | .19846781+01           | .76553195-01                     | .69432011+01                     | .68996393+00 |
| .99483758-01           | .19846951+01           | .76179325-01                     | .70050340+01                     | .69919527+00 |
| .99920090-01           | .19847127+01           | .75805811-01                     | .70685326+01                     | .70864837+00 |
| .10035642+00           | .19847309+01           | .75433251-01                     | .71337745+01                     | .71833323+00 |
| .10079275+00           | .19847497+01           | .75059287-01                     | .72008424+01                     | .72826057+00 |
| .10122490+00           | .19847691+01           | .74685980-01                     | .72698258+01                     | .73844188+00 |
| .10166541+00           | .19847892+01           | .74312438-01                     | .73408182+01                     | .74888920+00 |
| .10210174+00           | .19848100+01           | .73938500-01                     | .74139233+01                     | .75961586+00 |
| .10253806+00           | .19848315+01           | .73564001-01                     | .74889251+01                     | .77063604+00 |
| .10297439+00           | .19848535+01           | .73188769-01                     | .75669212+01                     | .78196491+00 |
| .10341071+00           | .19848763+01           | .72812620-01                     | .76470606+01                     | .79361889+00 |
| .10384703+00           | .19848997+01           | .72435365-01                     | .77298100+01                     | .80561589+00 |
| .10428336+00           | .19849238+01           | .72058808-01                     | .78153192+01                     | .81797509+00 |
| .10471968+00           | .19849486+01           | .71676727-01                     | .79037523+01                     | .83071725+00 |
| .10515601+00           | .19849742+01           | .71294906-01                     | .79952878+01                     | .84386525+00 |
| .10559233+00           | .19850005+01           | .70911102-01                     | .80901221+01                     | .85744398+00 |
| .10602866+00           | .19850276+01           | .70525059-01                     | .81884682+01                     | .87148048+00 |
| .10646498+00           | .19850554+01           | .70136500-01                     | .82905614+01                     | .88600454+00 |
| .10690131+00           | .19850842+01           | .69745129-01                     | .83966619+01                     | .90109909+00 |
| .10733763+00           | .19851138+01           | .69350626-01                     | .85070556+01                     | .91665024+00 |
| .10745092+00           | .19851217+01           | .69247643-01                     | .85364602+01                     | .92079695+00 |

$$.65728036+00 = AS/R$$

$$.97659290+01 = P_s/P_\infty$$

$$.30173907+01 = \rho_s/\rho_\infty$$

$$.32365477+01 = T_s/T_\infty$$

TABLE 52. CONICAL FLOWFIELD  $\theta_s = 5.0$  DEG;  $M_\infty = 27.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .99273508+00 | .27499920+02 | .87266460-01 | .10625568+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .87266460-01 | .19854324+01 | .87266460-01 | .57150261+01 | .50000000+00 |
| .87702792-01 | .19854333+01 | .86632271-01 | .57506889+01 | .50564857+00 |
| .88139124-01 | .19854344+01 | .86402237-01 | .57870336+01 | .51138899+00 |
| .88575456-01 | .19854363+01 | .85976171-01 | .58240807+01 | .51722395+00 |
| .89011768-01 | .19854366+01 | .85553890-01 | .58618515+01 | .52315627+00 |
| .89448120-01 | .19854420+01 | .85135216-01 | .59003688+01 | .52918898+00 |
| .89884453-01 | .19854460+01 | .84719980-01 | .59396566+01 | .53532521+00 |
| .90320785-01 | .19854505+01 | .84306015-01 | .59797394+01 | .54156622+00 |
| .90757117-01 | .19854558+01 | .83899162-01 | .60206434+01 | .54792143+00 |
| .91193449-01 | .19854616+01 | .83493262-01 | .60623959+01 | .55438644+00 |
| .91629781-01 | .19854681+01 | .83090162-01 | .61050258+01 | .56097303+00 |
| .92066113-01 | .19854753+01 | .82689714-01 | .61485630+01 | .56767911+00 |
| .92502445-01 | .19854830+01 | .82291770-01 | .61930395+01 | .57451086+00 |
| .92938777-01 | .19854914+01 | .81896185-01 | .62384884+01 | .58147262+00 |
| .93375109-01 | .19855003+01 | .81502819-01 | .62849452+01 | .58856899+00 |
| .93811441-01 | .19855099+01 | .81111530-01 | .63324468+01 | .59580477+00 |
| .94247773-01 | .19855200+01 | .80722180-01 | .63810323+01 | .60318509+00 |
| .94684105-01 | .19855308+01 | .80334633-01 | .64307429+01 | .61071526+00 |
| .95120437-01 | .19855421+01 | .79948746-01 | .64816224+01 | .61840095+00 |
| .95556770-01 | .19855540+01 | .79564393-01 | .65337168+01 | .62624813+00 |
| .95993102-01 | .19855665+01 | .79181431-01 | .65870752+01 | .63426314+00 |
| .96429434-01 | .19855795+01 | .78799723-01 | .66417492+01 | .64245264+00 |
| .96865766-01 | .19855932+01 | .78419134-01 | .66977940+01 | .65082376+00 |
| .97302098-01 | .19856074+01 | .78039525-01 | .67552676+01 | .65938395+00 |
| .97738430-01 | .19856222+01 | .77660757-01 | .68142323+01 | .66814125+00 |
| .98174762-01 | .19856376+01 | .77282688-01 | .68744754+01 | .67710412+00 |
| .98611094-01 | .19856535+01 | .76905174-01 | .69369045+01 | .68628167+00 |
| .99047426-01 | .19856701+01 | .76528069-01 | .70007576+01 | .69568347+00 |
| .99483758-01 | .19856873+01 | .76151222-01 | .70663949+01 | .70531990+00 |
| .99920090-01 | .19857050+01 | .75774481-01 | .71339020+01 | .71520191+00 |
| .10035642+00 | .19857234+01 | .75397484-01 | .72033719+01 | .72534132+00 |
| .10079275+00 | .19857426+01 | .75020670-01 | .72749027+01 | .73575063+00 |
| .10122907+00 | .19857624+01 | .74643260-01 | .73486036+01 | .74644373+00 |
| .10166540+00 | .19857828+01 | .74265304-01 | .74245894+01 | .75743520+00 |
| .10210172+00 | .19858039+01 | .73886592-01 | .75029849+01 | .76874063+00 |
| .10253805+00 | .19858257+01 | .73506942-01 | .75839249+01 | .78037771+00 |
| .10297437+00 | .19858482+01 | .73126151-01 | .76675565+01 | .79236444+00 |
| .10341069+00 | .19858713+01 | .72744007-01 | .77540376+01 | .80472095+00 |
| .10384702+00 | .19858952+01 | .72360283-01 | .78435420+01 | .81746914+00 |
| .10428334+00 | .19859198+01 | .71974744-01 | .79362596+01 | .83063293+00 |
| .10471967+00 | .19859452+01 | .71587130-01 | .80323972+01 | .84423824+00 |
| .10515599+00 | .19859714+01 | .71197164-01 | .81321824+01 | .85831372+00 |
| .10559232+00 | .19860044+01 | .70804564-01 | .82358665+01 | .87289081+00 |
| .10602864+00 | .19860262+01 | .70409003-01 | .83437269+01 | .88800418+00 |
| .10646568+00 | .19860411+01 | .70020189-01 | .84501406+01 | .89609328+00 |

$$.79967967+00 = \Delta S/R$$

$$.11549630+02 = P_s/P_\infty$$

$$.31521384+01 = \rho_s/\rho_\infty$$

$$.36640613+01 = T_s/T_\infty$$

TABLE 53. CONICAL FLOWFIELD  $\theta_s = 5.0$  DEG;  $M_\infty = 30.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .99311382+00 | .29999754+02 | .87266460-01 | .10533512+00 |              |
| $\theta$     | $M^*_1$      | $\psi_1$     | $x$          | $r$          |
| .87266460-01 | .19861904+01 | .87266460-01 | .57150261+01 | .50000000+00 |
| .87702792-01 | .19861908+01 | .86832270-01 | .57516873+01 | .50573635+00 |
| .88139124-01 | .19861919+01 | .86402228-01 | .57890692+01 | .51156887+00 |
| .88575456-01 | .19861937+01 | .85976139-01 | .58271941+01 | .51750044+00 |
| .89011788-01 | .19861963+01 | .85553813-01 | .58660854+01 | .52353413+00 |
| .89448120-01 | .19861995+01 | .85135068-01 | .59057679+01 | .52967321+00 |
| .89884453-01 | .19862034+01 | .84719725-01 | .59462677+01 | .53592105+00 |
| .90320785-01 | .19862080+01 | .84307614-01 | .59876121+01 | .54228123+00 |
| .90757117-01 | .19862132+01 | .83898567-01 | .60298296+01 | .54875744+00 |
| .91193449-01 | .19862191+01 | .83492422-01 | .60729503+01 | .55535361+00 |
| .91629781-01 | .19862256+01 | .83089017-01 | .61170060+01 | .56207385+00 |
| .92066113-01 | .19862328+01 | .82688200-01 | .61620298+01 | .56892245+00 |
| .92502445-01 | .19862405+01 | .82289815-01 | .62080572+01 | .57590400+00 |
| .92938777-01 | .19862489+01 | .81893713-01 | .62551247+01 | .58302324+00 |
| .93375109-01 | .19862579+01 | .81499745-01 | .63032717+01 | .59028521+00 |
| .93811441-01 | .19862674+01 | .81107765-01 | .63525391+01 | .59767522+00 |
| .94247773-01 | .19862776+01 | .80717627-01 | .64029707+01 | .60525887+00 |
| .94684105-01 | .19862884+01 | .80329185-01 | .64546127+01 | .61298212+00 |
| .95120437-01 | .19862998+01 | .79942298-01 | .65075139+01 | .62087122+00 |
| .95556770-01 | .19863117+01 | .79556819-01 | .65617261+01 | .62893278+00 |
| .95993102-01 | .19863242+01 | .79172406-01 | .66173042+01 | .63717386+00 |
| .96429434-01 | .19863373+01 | .78789513-01 | .66743066+01 | .64560191+00 |
| .96865766-01 | .19863511+01 | .78407394-01 | .67327957+01 | .65422487+00 |
| .97302098-01 | .19863654+01 | .78026100-01 | .67928370+01 | .66305112+00 |
| .97738430-01 | .19863803+01 | .77645483-01 | .68545018+01 | .67208970+00 |
| .98174762-01 | .19863957+01 | .77265391-01 | .69178655+01 | .68135019+00 |
| .98611094-01 | .19864118+01 | .76885668-01 | .69830087+01 | .69084284+00 |
| .99047426-01 | .19864285+01 | .76506154-01 | .70500177+01 | .70057857+00 |
| .99483758-01 | .19864458+01 | .76126684-01 | .71189850+01 | .71056909+00 |
| .99920090-01 | .19864638+01 | .75747093-01 | .71900108+01 | .72082703+00 |
| 1.0035641+00 | .19864825+01 | .75367202-01 | .72632011+01 | .73136576+00 |
| 1.0079274+00 | .19865019+01 | .74986832-01 | .73386734+01 | .74220006+00 |
| 1.0122906+00 | .19865219+01 | .74605796-01 | .74165530+01 | .75334572+00 |
| 1.0166539+00 | .19865426+01 | .74223893-01 | .74969754+01 | .76481974+00 |
| 1.0210171+00 | .19865640+01 | .73840921-01 | .75800874+01 | .77664054+00 |
| 1.0253804+00 | .19865861+01 | .73456658-01 | .76660487+01 | .78882810+00 |
| 1.0297436+00 | .19866089+01 | .73070876-01 | .77550335+01 | .80140424+00 |
| 1.0341069+00 | .19866324+01 | .72683330-01 | .78472325+01 | .81439273+00 |
| 1.0384701+00 | .19866567+01 | .72293758-01 | .79428547+01 | .82781964+00 |
| 1.0428334+00 | .19866818+01 | .71901886-01 | .80421300+01 | .84171356+00 |
| 1.0471966+00 | .19867077+01 | .71507408-01 | .81453102+01 | .85610581+00 |
| 1.0515599+00 | .19867345+01 | .71110004-01 | .82526751+01 | .87103109+00 |
| 1.0533512+00 | .19867457+01 | .70945921-01 | .82980375+01 | .87732191+00 |

$$.94355470+00 = \Delta S/R$$

$$.13502116+02 = P_g/P_\infty$$

$$.32682133+01 = \rho_g/\rho_\infty$$

$$.41313450+01 = T_g/T_\infty$$

TABLE 54. CONICAL FLOWFIELD  $\theta_s = 7.5$  DEG;  $M_\infty = 1.0814963$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .50000938+00 | .10814963+01 | .13089969+00 | .11961846+01 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .13089969+00 | .10000000+01 | .13089969+00 | .37978773+01 | .50000000+00 |
| .16187927+00 | .10006770+01 | .10580930+00 | .37865981+01 | .61838271+00 |
| .19285884+00 | .10020374+01 | .88703917-01 | .37820362+01 | .73857894+00 |
| .22383842+00 | .10036068+01 | .76264352-01 | .37825426+01 | .86110818+00 |
| .25481800+00 | .10052131+01 | .66708882-01 | .37871671+01 | .98648285+00 |
| .28579758+00 | .10067903+01 | .59314121-01 | .37953344+01 | .11152280+01 |
| .31677715+00 | .10083142+01 | .53253535-01 | .38066958+01 | .12478974+01 |
| .34775673+00 | .10097783+01 | .48229381-01 | .38210512+01 | .13850867+01 |
| .37524565+00 | .10110281+01 | .44432331-01 | .38362202+01 | .15111267+01 |
| .40273457+00 | .10122346+01 | .41124050-01 | .38536667+01 | .16417404+01 |
| .43022349+00 | .10134017+01 | .38210604-01 | .38734278+01 | .17774833+01 |
| .45771242+00 | .10145334+01 | .35620634-01 | .38955827+01 | .19189752+01 |
| .48520134+00 | .10156340+01 | .33298805-01 | .39202523+01 | .20669135+01 |
| .51269015+00 | .10167075+01 | .31201489-01 | .39475990+01 | .22220872+01 |
| .54017884+00 | .10177577+01 | .29293932-01 | .39778315+01 | .23853970+01 |
| .56417689+00 | .10186583+01 | .27761854-01 | .40067858+01 | .25354280+01 |
| .58817495+00 | .10195464+01 | .26333758-01 | .40383438+01 | .26932346+01 |
| .61217301+00 | .10204242+01 | .25008008-01 | .40727543+01 | .28597181+01 |
| .63617107+00 | .10212939+01 | .23762010-01 | .41103100+01 | .30359129+01 |
| .66016913+00 | .10221578+01 | .22590011-01 | .41513604+01 | .32230164+01 |
| .68416719+00 | .10230181+01 | .21483704-01 | .41963178+01 | .34224201+01 |
| .70816525+00 | .10238768+01 | .20435899-01 | .42456752+01 | .36357561+01 |
| .72867268+00 | .10246111+01 | .19501996-01 | .42917822+01 | .38305444+01 |
| .74918012+00 | .10253474+01 | .18762603-01 | .43419690+01 | .40383185+01 |
| .76968755+00 | .10260871+01 | .17974488-01 | .43967528+01 | .42607272+01 |
| .79019498+00 | .10268319+01 | .17214708-01 | .44567449+01 | .44997077+01 |
| .81070241+00 | .10275833+01 | .16480595-01 | .45226798+01 | .47575594+01 |
| .83120985+00 | .10283431+01 | .15769616-01 | .45954371+01 | .50370253+01 |
| .85171728+00 | .10291134+01 | .15079446-01 | .46760893+01 | .53414171+01 |
| .86873408+00 | .10297619+01 | .14520921-01 | .47499397+01 | .56157820+01 |
| .88575089+00 | .10304204+01 | .13973944-01 | .48310384+01 | .59128509+01 |
| .90276770+00 | .10310904+01 | .13437293-01 | .49204859+01 | .62359585+01 |
| .91978450+00 | .10317734+01 | .12909785-01 | .50196217+01 | .65891404+01 |
| .93680131+00 | .10324713+01 | .12390234-01 | .51300932+01 | .69773316+01 |
| .95381811+00 | .10331864+01 | .11877342-01 | .52539509+01 | .74066393+01 |
| .97083492+00 | .10339210+01 | .11369877-01 | .53937802+01 | .78847196+01 |
| .98436110+00 | .10345207+01 | .10969445-01 | .55184882+01 | .83059094+01 |
| .99788728+00 | .10351363+01 | .10570787-01 | .56574565+01 | .87701566+01 |
| .10114133+01 | .10357696+01 | .10172918-01 | .58132987+01 | .92850762+01 |
| .10249392+01 | .10364230+01 | .97750574-02 | .59893293+01 | .98602859+01 |

TABLE 54. (Concluded)

$$M_{\infty} = .10814963 + 01$$

$$\Theta_s = .13089969 + 00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .10384652+01 | .10370992+01 | .93762130-02 | .61898051+01 | .10508066+02 |
| .10519911+01 | .10378013+01 | .89751631-02 | .64203044+01 | .11244429+02 |
| .10655171+01 | .10385334+01 | .85704625-02 | .66882846+01 | .12090672+02 |
| .10755524+01 | .10390988+01 | .82667917-02 | .69172264+01 | .12806290+02 |
| .10855878+01 | .10396859+01 | .79592466-02 | .71779281+01 | .13613922+02 |
| .10956232+01 | .10402978+01 | .76467693-02 | .74777318+01 | .14534231+02 |
| .11056586+01 | .10409381+01 | .73280632-02 | .78265169+01 | .15594894+02 |
| .11156940+01 | .10416117+01 | .70014596-02 | .82379341+01 | .16833972+02 |
| .11257293+01 | .10423248+01 | .66648424-02 | .87314559+01 | .18305499+02 |
| .11357647+01 | .10430858+01 | .63152611-02 | .93359878+01 | .20089270+02 |
| .11423095+01 | .10436131+01 | .60784519-02 | .98105303+01 | .21477074+02 |
| .11488543+01 | .10441699+01 | .58329403-02 | .10369389+02 | .23099355+02 |
| .11553992+01 | .10447620+01 | .55766702-02 | .11039138+02 | .25028479+02 |
| .11619440+01 | .10453973+01 | .53068846-02 | .11859639+02 | .27372559+02 |
| .11684868+01 | .10460870+01 | .50195605-02 | .12894085+02 | .30302241+02 |
| .11750329+01 | .10468477+01 | .47084093-02 | .14250165+02 | .34106947+02 |
| .11815764+01 | .10477083+01 | .43631196-02 | .16132179+02 | .39333022+02 |
| .11881198+01 | .10487246+01 | .39637983-02 | .18997021+02 | .47195278+02 |
| .11946633+01 | .10500357+01 | .34597069-02 | .24230232+02 | .61352339+02 |
| .11961846+01 | .10504227+01 | .33129007-02 | .26248386+02 | .66759515+02 |

$$.33131801-06 = \Delta S/R$$

$$.11094174+01 = P_s/P_{\infty}$$

$$.10642012+01 = \rho_s/\rho_{\infty}$$

$$.10424101+01 = T_s/T_{\infty}$$

TABLE 55. CONICAL FLOWFIELD  $\theta_s = 7.5 \text{ DEG}$ ;  $M_\infty = 1.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .62980909+00 | .14999946+01 | .13089969+00 | .73596156+00 |              |
| $\theta$     | $M^*_1$      | $\psi_1$     | $x$          | $r$          |
| .13089969+00 | .12595946+01 | .13089969+00 | .37978773+01 | .50000000+00 |
| .14835297+00 | .12599071+01 | .11548165+00 | .38566277+01 | .57637681+00 |
| .16580626+00 | .12606379+01 | .10326132+00 | .39196680+01 | .65592736+00 |
| .18325954+00 | .12615932+01 | .93312249-01 | .39871358+01 | .73897180+00 |
| .20071282+00 | .12626687+01 | .85035987-01 | .40592446+01 | .82586245+00 |
| .21816611+00 | .12638054+01 | .78028023-01 | .41362781+01 | .91699054+00 |
| .23561939+00 | .12649698+01 | .72064793-01 | .42185890+01 | .10127933+01 |
| .25132734+00 | .12660246+01 | .67255296-01 | .42975312+01 | .11034181+01 |
| .26703530+00 | .12670771+01 | .63024718-01 | .43814575+01 | .11986308+01 |
| .28274325+00 | .12681220+01 | .59225906-01 | .44707903+01 | .12988842+01 |
| .29845121+00 | .12691566+01 | .55790056-01 | .45640191+01 | .14046904+01 |
| .31415916+00 | .12701794+01 | .52661955-01 | .46677077+01 | .15166296+01 |
| .32986712+00 | .12711900+01 | .49796838-01 | .47765077+01 | .16353635+01 |
| .34382974+00 | .12720781+01 | .47441054-01 | .48797968+01 | .17472195+01 |
| .35779237+00 | .12729574+01 | .45242365-01 | .49899095+01 | .18656500+01 |
| .37175500+00 | .12738284+01 | .43182410-01 | .51075462+01 | .19913482+01 |
| .38571762+00 | .12746920+01 | .41245282-01 | .52335107+01 | .21251075+01 |
| .39968025+00 | .12755492+01 | .39417308-01 | .53687347+01 | .22678414+01 |
| .41364288+00 | .12764011+01 | .37686647-01 | .55142983+01 | .24206066+01 |
| .42586017+00 | .12771431+01 | .36243375-01 | .56511365+01 | .25634681+01 |
| .43807747+00 | .12778828+01 | .34860302-01 | .57978377+01 | .27159044+01 |
| .45029477+00 | .12786212+01 | .33531558-01 | .59555401+01 | .28790192+01 |
| .46251207+00 | .12793591+01 | .32251965-01 | .61255688+01 | .30540945+01 |
| .47472937+00 | .12800976+01 | .31016771-01 | .63094754+01 | .32426283+01 |
| .48694666+00 | .12808379+01 | .29821541-01 | .65090894+01 | .34463838+01 |
| .49974186+00 | .12814746+01 | .28825790-01 | .66943238+01 | .36347195+01 |
| .50789054+00 | .12821143+01 | .27853891-01 | .68943000+01 | .38373156+01 |
| .51836242+00 | .12827579+01 | .26903562-01 | .71109144+01 | .40559904+01 |
| .52083430+00 | .12834061+01 | .25972567-01 | .73464082+01 | .42928897+01 |
| .53936618+00 | .12840603+01 | .25058717-01 | .76034508+01 | .45505655+01 |
| .54977806+00 | .12847213+01 | .24159849-01 | .78852521+01 | .48320815+01 |
| .55850463+00 | .12852784+01 | .23420624-01 | .81417812+01 | .50875412+01 |
| .56723119+00 | .12858421+01 | .22688985-01 | .84208963+01 | .53646929+01 |
| .57595776+00 | .12864133+01 | .21963626-01 | .87258276+01 | .56666075+01 |
| .58468433+00 | .12869929+01 | .21243170-01 | .90604644+01 | .59969777+01 |
| .59341089+00 | .12875822+01 | .20526186-01 | .94295384+01 | .63602894+01 |
| .60213746+00 | .12881825+01 | .19811124-01 | .98388606+01 | .67620451+01 |
| .60911871+00 | .12886717+01 | .19239314-01 | .10200095+02 | .71156667+01 |
| .61609997+00 | .12891699+01 | .18666744-01 | .10596217+02 | .75025197+01 |
| .62308122+00 | .12896780+01 | .18092357-01 | .11032745+02 | .79278091+01 |



TABLE 55. (Concluded)

$$M_{\infty} = .14999946+01$$

$$\Theta_s = .13089969+00$$

| $\underline{\Theta}$ | $\underline{M_1^*}$ | $\underline{\psi_1}$ | $\underline{x}$ | $\underline{r}$ |
|----------------------|---------------------|----------------------|-----------------|-----------------|
| .63066248+00         | .12961972+01        | .17515019-01         | .11516447+02    | .83979129+01    |
| .63704373+00         | .12907293+01        | .16933434-01         | .12055733+02    | .89207457+01    |
| .64402498+00         | .12912748+01        | .16346127-01         | .12661195+02    | .95062641+01    |
| .64926092+00         | .12916946+01        | .15900873-01         | .13166726+02    | .99940565+01    |
| .65449686+00         | .12921243+01        | .15450627-01         | .13724167+02    | .10530889+02    |
| .65973280+00         | .12925651+01        | .14994420-01         | .14342315+02    | .11125002+02    |
| .66496874+00         | .12930102+01        | .14531165-01         | .15032145+02    | .11786665+02    |
| .67020468+00         | .12934851+01        | .14059581-01         | .15807521+02    | .12528842+02    |
| .67544062+00         | .12939676+01        | .13578109-01         | .16686268+02    | .13368172+02    |
| .67893125+00         | .12942990+01        | .13250738-01         | .17340746+02    | .13992165+02    |
| .68242188+00         | .12946391+01        | .12917534-01         | .18060084+02    | .14676976+02    |
| .68591250+00         | .12949887+01        | .12577705-01         | .18854973+02    | .15432557+02    |
| .68940313+00         | .12953490+01        | .12230441-01         | .19738660+02    | .16271231+02    |
| .69289376+00         | .12957211+01        | .11874668-01         | .20727814+02    | .17208494+02    |
| .69638439+00         | .12961065+01        | .11509143-01         | .21843739+02    | .18264127+02    |
| .69987462+00         | .12965074+01        | .11132531-01         | .23113987+02    | .19463689+02    |
| .70336448+00         | .12969255+01        | .10742798-01         | .24575293+02    | .20841228+02    |
| .70685433+00         | .12973636+01        | .10337479-01         | .26277852+02    | .22443223+02    |
| .71034418+00         | .12978254+01        | .99137276-02         | .28291842+02    | .24334585+02    |
| .71383403+00         | .12983158+01        | .94675124-02         | .30719316+02    | .26609603+02    |
| .71732388+00         | .12988413+01        | .89932904-02         | .33715538+02    | .29411556+02    |
| .72081374+00         | .12994115+01        | .84831119-02         | .37530947+02    | .32971260+02    |
| .72430359+00         | .13000411+01        | .79245418-02         | .42602857+02    | .37691212+02    |
| .72779344+00         | .13007553+01        | .72965398-02         | .49786993+02    | .44357800+02    |
| .73128329+00         | .13016035+01        | .65573454-02         | .61089212+02    | .54811149+02    |
| .73477314+00         | .13027174+01        | .55957735-02         | .83171247+02    | .75149406+02    |
| .73596156+00         | .13032316+01        | .51548555-02         | .97741533+02    | .88525608+02    |

$$.41304156-06 = \Delta S/R$$

$$.11455636+01 = P_s/P_{\infty}$$

$$.10849526+01 = \rho_s/\rho_{\infty}$$

$$.10558652+01 = T_s/T_{\infty}$$



TABLE 56. CONICAL FLOWFIELD  $\theta_s = 7.5$  DEG;  $M_\infty = 2.0$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .73214424+00 | .19999913+01 | .43089969+00 | .53286955+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .13089969+00 | .14642610+01 | .13089969+00 | .37978773+01 | .50000000+00 |
| .14529865+00 | .14645171+01 | .11791114+00 | .38797517+01 | .56772350+00 |
| .15969761+00 | .14651401+01 | .10721200+00 | .39683378+01 | .63917217+00 |
| .17409657+00 | .14659854+01 | .98213442-01 | .40640497+01 | .71477322+00 |
| .18762286+00 | .14669053+01 | .90949463-01 | .41610941+01 | .79000823+00 |
| .20114915+00 | .14679023+01 | .84593944-01 | .42656629+01 | .86979719+00 |
| .21467545+00 | .14689484+01 | .78970946-01 | .43785052+01 | .95466828+00 |
| .22732908+00 | .14699555+01 | .74255111-01 | .44923407+01 | .10392031+01 |
| .23998271+00 | .14709800+01 | .69977954-01 | .46150464+01 | .11292944+01 |
| .25263634+00 | .14720155+01 | .66071395-01 | .47476259+01 | .12256093+01 |
| .26441731+00 | .14729860+01 | .62718641-01 | .48809732+01 | .13215578+01 |
| .27619827+00 | .14739605+01 | .59602369-01 | .50250227+01 | .14243061+01 |
| .28797924+00 | .14749380+01 | .56691542-01 | .51810934+01 | .15347093+01 |
| .29888754+00 | .14758454+01 | .54156557-01 | .53376732+01 | .16446319+01 |
| .30979584+00 | .14767551+01 | .51757123-01 | .55073573+01 | .17629184+01 |
| .32070414+00 | .14776678+01 | .49477439-01 | .56918780+01 | .18906772+01 |
| .33073978+00 | .14785106+01 | .47473792-01 | .58765092+01 | .20177091+01 |
| .34077542+00 | .14793574+01 | .45549866-01 | .60773579+01 | .21550892+01 |
| .35081106+00 | .14802093+01 | .43696776-01 | .62967119+01 | .23042684+01 |
| .35997403+00 | .14809925+01 | .42059720-01 | .65154769+01 | .24522509+01 |
| .36913700+00 | .14817822+01 | .40469024-01 | .67544300+01 | .26131102+01 |
| .37829998+00 | .14825795+01 | .38919158-01 | .70167602+01 | .27887610+01 |
| .38659029+00 | .14833687+01 | .37547659-01 | .72771889+01 | .29623590+01 |
| .39488060+00 | .14840467+01 | .36201380-01 | .75630236+01 | .31520540+01 |
| .40317091+00 | .14847949+01 | .34876455-01 | .78783200+01 | .33603868+01 |
| .41058855+00 | .14854745+01 | .33705916-01 | .81894652+01 | .35651290+01 |
| .41800620+00 | .14861656+01 | .32546483-01 | .85325860+01 | .37900317+01 |
| .42542384+00 | .14868681+01 | .31395175-01 | .89131067+01 | .40384743+01 |
| .43196882+00 | .14875005+01 | .30383512-01 | .92852759+01 | .42805689+01 |
| .43851380+00 | .14881456+01 | .29373288-01 | .96975869+01 | .45478405+01 |
| .44505879+00 | .14888052+01 | .28361928-01 | .10157240+02 | .48447529+01 |
| .45073110+00 | .14893903+01 | .27482215-01 | .10600870+02 | .51303663+01 |
| .45640342+00 | .14899894+01 | .26597347-01 | .11094300+02 | .54470494+01 |
| .46207574+00 | .14906045+01 | .25704831-01 | .11646902+02 | .58005845+01 |
| .46687539+00 | .14911392+01 | .24941590-01 | .12169487+02 | .61339234+01 |
| .47167504+00 | .14916884+01 | .24168912-01 | .12752161+02 | .65045577+01 |
| .47647469+00 | .14922543+01 | .23384459-01 | .13406594+02 | .69196556+01 |
| .48040168+00 | .14927313+01 | .22731982-01 | .14005782+02 | .72987140+01 |
| .48432867+00 | .14932225+01 | .22068001-01 | .14673484+02 | .77200897+01 |
| .48825560+00 | .14937307+01 | .21391168-01 | .15423003+02 | .81919209+01 |

TABLE 56. (Concluded)

$$M_{\infty} = .19999913+01$$

$$\Theta_s = .13087769+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .49136987+00 | .14941386+01 | .20853780-01 | .16073354+02 | .86003996+01 |
| .49436415+00 | .14945588+01 | .20305190-01 | .16793746+02 | .90519468+01 |
| .49741842+00 | .14949928+01 | .19743696-01 | .17597036+02 | .95544013+01 |
| .49960004+00 | .14953122+01 | .19333627-01 | .18230468+02 | .99498843+01 |
| .50178128+00 | .14956403+01 | .18914692-01 | .18921743+02 | .10380802+02 |
| .50396244+00 | .14959780+01 | .18486187-01 | .19679955+02 | .10852682+02 |
| .50527114+00 | .14961857+01 | .18224075-01 | .20171534+02 | .11158219+02 |
| .50657983+00 | .14963975+01 | .17957784-01 | .20693999+02 | .11482624+02 |
| .50788853+00 | .14966137+01 | .17687038-01 | .21250611+02 | .11827875+02 |
| .50919722+00 | .14968347+01 | .17411508-01 | .21845128+02 | .12196249+02 |
| .51050591+00 | .14970606+01 | .17130725-01 | .22481914+02 | .12590391+02 |
| .51181461+00 | .14972921+01 | .16844265-01 | .23166070+02 | .13012390+02 |
| .51312330+00 | .14975295+01 | .16551532-01 | .23903602+02 | .13468877+02 |
| .51443200+00 | .14977735+01 | .16252011-01 | .24701648+02 | .13961171+02 |
| .51574069+00 | .14980245+01 | .15944943-01 | .25568756+02 | .14495437+02 |
| .51704939+00 | .14982834+01 | .15629552-01 | .26515268+02 | .15077921+02 |
| .51835808+00 | .14985510+01 | .15304856-01 | .27553874+02 | .15716280+02 |
| .51966678+00 | .14988283+01 | .14969721-01 | .28700314+02 | .16420007+02 |
| .52097547+00 | .14991166+01 | .14622688-01 | .29974404+02 | .17201046+02 |
| .52228417+00 | .14994173+01 | .14262214-01 | .31401581+02 | .18074711+02 |
| .52359286+00 | .14997324+01 | .13886079-01 | .33015110+02 | .19061022+02 |
| .52490155+00 | .15000642+01 | .13491593-01 | .34859584+02 | .20186788+02 |
| .52621025+00 | .15004158+01 | .13075218-01 | .36996638+02 | .21489035+02 |
| .52751894+00 | .15007915+01 | .12632273-01 | .39514472+02 | .23020698+02 |
| .52882764+00 | .15011973+01 | .12155943-01 | .42545417+02 | .24861128+02 |
| .53013633+00 | .15016420+01 | .11636227-01 | .46300580+02 | .27136777+02 |
| .53144503+00 | .15021400+01 | .11056848-01 | .51146734+02 | .30067107+02 |
| .53275372+00 | .15027173+01 | .10388292-01 | .57808263+02 | .34085027+02 |
| .53286955+00 | .15027737+01 | .10323152-01 | .58529670+02 | .34519521+02 |

$$.49453229-05 = \Delta S/R$$

$$.12194818+01 = P_s/P_{\infty}$$

$$.11264277+01 = \rho_s/\rho_{\infty}$$

$$.10026100+01 = T_s/T_{\infty}$$

TABLE 57. CONICAL FLOWFIELD  $\theta_s = 7.5$  DEG;  $M_\infty = 2.5$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .79927392+00 | .24999964+01 | .13089969+00 | .42561089+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .13089969+00 | .15985179+01 | .13089969+00 | .37978773+01 | .50000000+00 |
| .13875367+00 | .15986076+01 | .12348518+00 | .38574416+01 | .53869570+00 |
| .14660764+00 | .15988460+01 | .11684727+00 | .39203092+01 | .57890082+00 |
| .15446162+00 | .15991969+01 | .11085826+00 | .39866737+01 | .62073251+00 |
| .16231560+00 | .15996342+01 | .10541743+00 | .40567569+01 | .66431932+00 |
| .17016958+00 | .16001383+01 | .10044408+00 | .41308104+01 | .70980293+00 |
| .17802355+00 | .16006947+01 | .95872631-01 | .42091191+01 | .75733992+00 |
| .18587753+00 | .16012924+01 | .91649219-01 | .42920043+01 | .80710391+00 |
| .19285884+00 | .16018514+01 | .88150889-01 | .43698158+01 | .85336409+00 |
| .19984016+00 | .16024319+01 | .84865462-01 | .44518164+01 | .90168704+00 |
| .20682147+00 | .16030302+01 | .81770016-01 | .45383270+01 | .95223973+00 |
| .21380278+00 | .16036434+01 | .78844640-01 | .46297058+01 | .10052074+01 |
| .22078410+00 | .16042694+01 | .76071976-01 | .47263553+01 | .10607967+01 |
| .22776541+00 | .16049063+01 | .73436758-01 | .48287277+01 | .11192387+01 |
| .23474672+00 | .16055531+01 | .70925513-01 | .49373329+01 | .11807924+01 |
| .24085537+00 | .16061262+01 | .68820400-01 | .50379281+01 | .12374335+01 |
| .24696402+00 | .16067055+01 | .66793781-01 | .51444724+01 | .12969998+01 |
| .25307267+00 | .16072908+01 | .64839043-01 | .52565550+01 | .13594371+01 |
| .25918132+00 | .16078819+01 | .62950127-01 | .53756263+01 | .14253210+01 |
| .26528997+00 | .16084787+01 | .61121594-01 | .55020070+01 | .14948617+01 |
| .27139862+00 | .16090812+01 | .59348185-01 | .56364024+01 | .15684105+01 |
| .27750727+00 | .16096896+01 | .57625193-01 | .57796146+01 | .16463660+01 |
| .28274325+00 | .16102160+01 | .56185033-01 | .59100776+01 | .17170357+01 |
| .28797924+00 | .16107471+01 | .54775946-01 | .60403488+01 | .17916019+01 |
| .29321522+00 | .16112832+01 | .53395372-01 | .61951710+01 | .18704318+01 |
| .29845121+00 | .16118247+01 | .52040886-01 | .63513908+01 | .19539423+01 |
| .30368719+00 | .16123719+01 | .50710039-01 | .65179724+01 | .20426080+01 |
| .30892318+00 | .16129253+01 | .49400575-01 | .66960225+01 | .21369726+01 |
| .31415916+00 | .16134853+01 | .48110165-01 | .68868170+01 | .22376617+01 |
| .31852248+00 | .16139576+01 | .47047749-01 | .70566098+01 | .23269201+01 |
| .32288580+00 | .16144353+01 | .45995675-01 | .72372636+01 | .24215536+01 |
| .32724912+00 | .16149190+01 | .44952616-01 | .74299031+01 | .25221113+01 |
| .33161245+00 | .16154090+01 | .43917213-01 | .76358245+01 | .26292242+01 |
| .33597577+00 | .16159060+01 | .42888030-01 | .78565205+01 | .27436187+01 |
| .34033909+00 | .16164105+01 | .41863669-01 | .80937282+01 | .28661384+01 |
| .34470241+00 | .16169233+01 | .40842570-01 | .83494784+01 | .29977679+01 |
| .34819306+00 | .16173401+01 | .40026948-01 | .85690218+01 | .31104019+01 |
| .35168372+00 | .16177632+01 | .39211471-01 | .88033800+01 | .32302923+01 |
| .35517438+00 | .16181930+01 | .38395248-01 | .90541983+01 | .33582337+01 |
| .35866503+00 | .16186302+01 | .37577257-01 | .93233052+01 | .34951461+01 |

TABLE 57. (Concluded)

$$M_{\infty} = .24999964 + 01$$

$$\Theta_s = .13089969 + 00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $\kappa$     | $\Gamma$     |
|--------------|--------------|--------------|--------------|--------------|
| .36215569+00 | .16190755+01 | .36756363-01 | .96131678+01 | .36421020+01 |
| .36564635+00 | .16195295+01 | .35931356-01 | .99261653+01 | .38003611+01 |
| .36913700+00 | .16199931+01 | .35160937-01 | .10265482+02 | .39714139+01 |
| .37175500+00 | .16203476+01 | .34473658-01 | .10539448+02 | .41091576+01 |
| .37437299+00 | .16207086+01 | .33841848-01 | .10832131+02 | .42559723+01 |
| .37699094+00 | .16210774+01 | .33205099-01 | .11145656+02 | .44128750+01 |
| .37960888+00 | .16214536+01 | .32562211-01 | .11482515+02 | .45810557+01 |
| .38222683+00 | .16218380+01 | .31912085-01 | .11845619+02 | .47619045+01 |
| .38484478+00 | .16222313+01 | .31253722-01 | .12238418+02 | .49570648+01 |
| .38746273+00 | .16226344+01 | .30585892-01 | .12665024+02 | .51684952+01 |
| .38920803+00 | .16229091+01 | .30134775-01 | .12970616+02 | .53196312+01 |
| .39095332+00 | .16231889+01 | .29678315-01 | .13295136+02 | .54798530+01 |
| .39269862+00 | .16234741+01 | .29216055-01 | .13640554+02 | .56500950+01 |
| .39444392+00 | .16237653+01 | .28747380-01 | .14009144+02 | .58314359+01 |
| .39618922+00 | .16240629+01 | .28271679-01 | .14400354+02 | .60251236+01 |
| .39793452+00 | .16243673+01 | .27788218-01 | .14826823+02 | .62326130+01 |
| .39967982+00 | .16246794+01 | .27296118-01 | .15282602+02 | .64556133+01 |
| .40142512+00 | .16249996+01 | .26794493-01 | .15775164+02 | .66961483+01 |
| .40317041+00 | .16253288+01 | .26282206-01 | .16309035+02 | .69566363+01 |
| .40491571+00 | .16256680+01 | .25757987-01 | .16892208+02 | .72395959+01 |
| .40666101+00 | .16260183+01 | .25220360-01 | .17530451+02 | .75497903+01 |
| .40840631+00 | .16263808+01 | .24667507-01 | .18233750+02 | .78904324+01 |
| .41015161+00 | .16267573+01 | .24097305-01 | .19013864+02 | .82674459+01 |
| .41189691+00 | .16271497+01 | .23507107-01 | .19885869+02 | .86879036+01 |
| .41364221+00 | .16275603+01 | .22893682-01 | .20869391+02 | .91610016+01 |
| .41538750+00 | .16279923+01 | .22252798-01 | .21990670+02 | .96990185+01 |
| .41713280+00 | .16284497+01 | .21579023-01 | .23285773+02 | .10315809+02 |
| .41887810+00 | .16289377+01 | .20864978-01 | .24806105+02 | .11044362+02 |
| .42062340+00 | .16294641+01 | .20100370-01 | .26628303+02 | .11911385+02 |
| .42236870+00 | .16300402+01 | .19269675-01 | .28873719+02 | .12976350+02 |
| .42411400+00 | .16306841+01 | .18348180-01 | .31751694+02 | .14336130+02 |
| .42586089+00 | .16313144+01 | .17452583-01 | .35020369+02 | .15875411+02 |

$$.38850121-04 = \Delta S/R$$

$$.13086335+01 = P_s/P_{\infty}$$

$$.11751212+01 = \rho_s/\rho_{\infty}$$

$$.11136158+01 = T_s/T_{\infty}$$

TABLE 58. CONICAL FLOWFIELD  $\theta_s = 7.5 \text{ DEG}$ ;  $M_\infty = 3.0$

| $\underline{u}_s$    | $\underline{M}_\infty$ | $\underline{\theta}_s$ | $\underline{\theta}_w$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .84441851+00         | .29999944+01           | .13089969+00           | .35959926+00           |                 |
| $\underline{\theta}$ | $\underline{M}_1^*$    | $\underline{\psi}_1$   | $\underline{x}$        | $\underline{r}$ |
| .13089969+00         | .16888053+01           | .13089969+00           | .37978773+01           | .50000000+00    |
| .13788100+00         | .16888810+01           | .12426716+00           | .38636064+01           | .53611965+00    |
| .14486232+00         | .16890848+01           | .11825615+00           | .39332229+01           | .57379511+00    |
| .15184363+00         | .16893889+01           | .11277067+00           | .40070011+01           | .61315726+00    |
| .15882494+00         | .16897725+01           | .10773376+00           | .40852527+01           | .65435138+00    |
| .16580626+00         | .16902201+01           | .10308286+00           | .41683330+01           | .69753961+00    |
| .17278757+00         | .16907195+01           | .98766437-01           | .42566454+01           | .74290342+00    |
| .17976888+00         | .16912618+01           | .94741557-01           | .43506494+01           | .79064684+00    |
| .18587753+00         | .16917657+01           | .91435387-01           | .44379827+01           | .83455487+00    |
| .19198618+00         | .16922931+01           | .88293893-01           | .45304736+01           | .88063468+00    |
| .19809483+00         | .16928412+01           | .85313927-01           | .46285715+01           | .92908085+00    |
| .20420348+00         | .16934074+01           | .82474507-01           | .47327859+01           | .98011262+00    |
| .21031213+00         | .16939902+01           | .79761490-01           | .48436949+01           | .10339776+01    |
| .21642078+00         | .16945880+01           | .77162238-01           | .49619588+01           | .10909571+01    |
| .22252943+00         | .16951997+01           | .74665410-01           | .50883335+01           | .11513720+01    |
| .22776541+00         | .16957347+01           | .72598994-01           | .52037666+01           | .12061680+01    |
| .23300140+00         | .16962792+01           | .70594344-01           | .53264235+01           | .12640217+01    |
| .23823738+00         | .16968331+01           | .68645932-01           | .54570177+01           | .13252331+01    |
| .24347337+00         | .16973964+01           | .66748597-01           | .55963666+01           | .13901443+01    |
| .24870935+00         | .16979692+01           | .64897437-01           | .57454084+01           | .14591474+01    |
| .25394534+00         | .16985517+01           | .63087858-01           | .59052273+01           | .15326944+01    |
| .25918132+00         | .16991445+01           | .61315354-01           | .60770842+01           | .16113092+01    |
| .26354464+00         | .16996467+01           | .59863493-01           | .62305514+01           | .16811313+01    |
| .26790796+00         | .17001568+01           | .58431894-01           | .63943899+01           | .17553058+01    |
| .27227128+00         | .17006752+01           | .57018097-01           | .65697420+01           | .18343043+01    |
| .27663460+00         | .17012025+01           | .55619668-01           | .67579336+01           | .19186730+01    |
| .28099792+00         | .17017394+01           | .54234121-01           | .69605114+01           | .20090477+01    |
| .28536125+00         | .17022867+01           | .52858826-01           | .71792936+01           | .21061742+01    |
| .28972457+00         | .17028452+01           | .51491149-01           | .74164338+01           | .22109342+01    |
| .29321522+00         | .17033008+01           | .50400577-01           | .76210765+01           | .23009379+01    |
| .29670588+00         | .17037649+01           | .49311496-01           | .78406613+01           | .23971299+01    |
| .30019654+00         | .17042383+01           | .48222285-01           | .80770079+01           | .25002507+01    |
| .30368719+00         | .17047217+01           | .47131121-01           | .83322597+01           | .26111710+01    |
| .30717785+00         | .17052161+01           | .46036109-01           | .86089629+01           | .27309229+01    |
| .31066851+00         | .17057226+01           | .44935010-01           | .89101681+01           | .28607409+01    |
| .31415910+00         | .17062439+01           | .43825801-01           | .92395654+01           | .30021151+01    |
| .31677705+00         | .17066445+01           | .42786372-01           | .95078013+01           | .31168124+01    |
| .31939500+00         | .17070542+01           | .42139921-01           | .97967116+01           | .32399498+01    |
| .32201295+00         | .17074740+01           | .41284055-01           | .10109016+02           | .33726196+01    |
| .32463089+00         | .17079047+01           | .40417444-01           | .10447959+02           | .35161225+01    |

TABLE 58. (Concluded)

$$M_{\infty} = .29999944+01$$

$$\Theta_S = .13089969+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $\bar{x}$    | $\bar{r}$    |
|--------------|--------------|--------------|--------------|--------------|
| .32724884+00 | .17083475+01 | .39538052-01 | .10817452+02 | .36720254+01 |
| .32986679+00 | .17088037+01 | .38643677-01 | .11222276+02 | .38422383+01 |
| .33248474+00 | .17092752+01 | .37731782-01 | .11668329+02 | .40291146+01 |
| .33423004+00 | .17095985+01 | .37112541-01 | .11992179+02 | .41643808+01 |
| .33597533+00 | .17099302+01 | .36483116-01 | .12340263+02 | .43094053+01 |
| .33772063+00 | .17102708+01 | .35842180-01 | .12715737+02 | .44654406+01 |
| .33946593+00 | .17106213+01 | .35188280-01 | .13122369+02 | .46339821+01 |
| .34121123+00 | .17109828+01 | .34519795-01 | .13564718+02 | .48168348+01 |
| .34295653+00 | .17113564+01 | .33834681-01 | .14048349+02 | .50161998+01 |
| .34470183+00 | .17117436+01 | .33130679-01 | .14560158+02 | .52347999+01 |
| .34655748+00 | .17119429+01 | .32770697-01 | .14066751+02 | .53523475+01 |
| .34644713+00 | .17121462+01 | .32404900-01 | .15168808+02 | .54760519+01 |
| .34731977+00 | .17123540+01 | .32032762-01 | .15487795+02 | .56064903+01 |
| .34819242+00 | .17125665+01 | .31653810-01 | .15825387+02 | .57443214+01 |
| .34906507+00 | .17127841+01 | .31267501-01 | .16183510+02 | .58903016+01 |
| .34993772+00 | .17130071+01 | .30873090-01 | .16564388+02 | .60453045+01 |
| .35081037+00 | .17132362+01 | .30469913-01 | .16970614+02 | .62103474+01 |
| .35168302+00 | .17134717+01 | .30057091-01 | .17405226+02 | .63866203+01 |
| .35255567+00 | .17137144+01 | .29633619-01 | .17871822+02 | .65755332+01 |
| .35342832+00 | .17139650+01 | .29198367-01 | .18374703+02 | .67787681+01 |
| .35430097+00 | .17142243+01 | .28749924-01 | .18919069+02 | .69983574+01 |
| .35517362+00 | .17144933+01 | .28286722-01 | .19511273+02 | .72367821+01 |
| .35604627+00 | .17147733+01 | .27806759-01 | .20159207+02 | .74971213+01 |
| .35691892+00 | .17150659+01 | .27307604-01 | .20872829+02 | .77832548+01 |
| .35779157+00 | .17153729+01 | .26786234-01 | .21664965+02 | .81001755+01 |
| .35866421+00 | .17156967+01 | .26238848-01 | .22552480+02 | .84544415+01 |
| .35953686+00 | .17160407+01 | .25660280-01 | .23558273+02 | .88549467+01 |
| .35959926+00 | .17160661+01 | .25617540-01 | .23635498+02 | .88856566+01 |

$$.19129738-03 = \Delta S/R$$

$$.14113787+01 = P_S/P_{\infty}$$

$$.12295639+01 = \rho_S/\rho_{\infty}$$

$$.11478693+01 = T_S/T_{\infty}$$



TABLE 59. CONICAL FLOWFIELD  $\theta_s = 7.5$  DEG;  $M_\infty = 4.0$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .89813013+00 | .39999853+01 | .13089909+00 | .28429378+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .13089909+00 | .17962266+01 | .13089909+00 | .37978773+01 | .50000000+00 |
| .13526301+00 | .17962590+01 | .12667511+00 | .38532037+01 | .52439797+00 |
| .13962633+00 | .17963499+01 | .12270643+00 | .39111890+01 | .54968172+00 |
| .14398965+00 | .17964908+01 | .11896495+00 | .39720013+01 | .57591273+00 |
| .14835297+00 | .17966750+01 | .11542613+00 | .40358277+01 | .60315042+00 |
| .15271629+00 | .17968970+01 | .11206877+00 | .41028755+01 | .63149287+00 |
| .15707961+00 | .17971521+01 | .10887446+00 | .41733751+01 | .66099758+00 |
| .16130660+00 | .17974070+01 | .10612560+00 | .42399880+01 | .68862683+00 |
| .16493359+00 | .17976834+01 | .10348525+00 | .43098119+01 | .71734928+00 |
| .16886058+00 | .17979793+01 | .10094405+00 | .43830765+01 | .74724466+00 |
| .17278757+00 | .17982932+01 | .98493503+00 | .44600363+01 | .77840080+00 |
| .17671456+00 | .17986236+01 | .96125918+00 | .45409738+01 | .81091489+00 |
| .18064155+00 | .17989694+01 | .93834264+00 | .46262043+01 | .84489475+00 |
| .18413220+00 | .17992890+01 | .91855753+00 | .47058523+01 | .87642638+00 |
| .18762286+00 | .17996196+01 | .89927923+00 | .47894455+01 | .90930445+00 |
| .19111352+00 | .17999606+01 | .88046836+00 | .48772901+01 | .94363265+00 |
| .19460417+00 | .18003118+01 | .86208791+00 | .49697266+01 | .97952600+00 |
| .19809483+00 | .18006729+01 | .84410267+00 | .50671365+01 | .10171128+01 |
| .20158549+00 | .18010437+01 | .82647936+00 | .51699466+01 | .10565365+01 |
| .20463981+00 | .18013762+01 | .81133064+00 | .52647120+01 | .10926651+01 |
| .20769414+00 | .18017160+01 | .79641370+00 | .53643404+01 | .11304435+01 |
| .21074846+00 | .18020633+01 | .78170834+00 | .54692352+01 | .11700063+01 |
| .21380278+00 | .18024182+01 | .76719465+00 | .55798488+01 | .12115036+01 |
| .21685711+00 | .18027808+01 | .75285301+00 | .56966901+01 | .12551043+01 |
| .21991143+00 | .18031513+01 | .73866390+00 | .58203332+01 | .13009983+01 |
| .22252943+00 | .18034754+01 | .72660824+00 | .59322191+01 | .13423238+01 |
| .22514742+00 | .18038056+01 | .71463762+00 | .60500438+01 | .13856446+01 |
| .22776541+00 | .18041424+01 | .70273936+00 | .61743289+01 | .14311322+01 |
| .23038340+00 | .18044858+01 | .69090029+00 | .63056608+01 | .14789790+01 |
| .23300140+00 | .18048363+01 | .67910690+00 | .64447058+01 | .15294030+01 |
| .23561939+00 | .18051942+01 | .66734497+00 | .65922221+01 | .15826521+01 |
| .23780105+00 | .18054984+01 | .65755567+00 | .67222455+01 | .16293870+01 |
| .23998271+00 | .18058083+01 | .64777087+00 | .68593220+01 | .16784649+01 |
| .24216437+00 | .18061243+01 | .63797809+00 | .70040948+01 | .17300948+01 |
| .24434603+00 | .18064467+01 | .62816761+00 | .71572940+01 | .17845133+01 |
| .24652765+00 | .18067767+01 | .61833020+00 | .73197488+01 | .18419887+01 |
| .24870928+00 | .18071140+01 | .60845286+00 | .74924158+01 | .19028300+01 |
| .25045457+00 | .18073895+01 | .60051270+00 | .76386350+01 | .19541629+01 |
| .25219987+00 | .18076702+01 | .59253119+00 | .77927298+01 | .20080816+01 |
| .25394517+00 | .18079565+01 | .58450039+00 | .79554268+01 | .20648197+01 |

TABLE 59. (Concluded)

$$M_{\infty} = .39999853+01$$

$$\Theta_s = .13089969+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .25569047+00 | .18082488+01 | .57641167-01 | .81275505+01 | .21246416+01 |
| .25743577+00 | .18085474+01 | .56825496-01 | .83100412+01 | .21878486+01 |
| .25918107+00 | .18088531+01 | .56002251-01 | .85039812+01 | .22547868+01 |
| .26099304+00 | .18090672+01 | .55378649-01 | .86576936+01 | .23076765+01 |
| .26179902+00 | .18093256+01 | .54749660-01 | .88191444+01 | .23630791+01 |
| .26310799+00 | .18095688+01 | .54114506-01 | .89890100+01 | .24212099+01 |
| .26441696+00 | .18098170+01 | .53472459-01 | .91680537+01 | .24823117+01 |
| .26572594+00 | .18100705+01 | .52822892-01 | .93571415+01 | .25466594+01 |
| .26703491+00 | .18103290+01 | .52164942-01 | .95572619+01 | .26145662+01 |
| .26790756+00 | .18105060+01 | .51721200-01 | .96973585+01 | .26619901+01 |
| .26878021+00 | .18106852+01 | .51273037-01 | .98432384+01 | .27112743+01 |
| .26965286+00 | .18108674+01 | .50820135-01 | .99953181+01 | .27625504+01 |
| .27052551+00 | .18110528+01 | .50362162-01 | .10154061+02 | .28159646+01 |
| .27139816+00 | .18112416+01 | .49898688-01 | .10319982+02 | .28716791+01 |
| .27227081+00 | .18114340+01 | .49429338-01 | .10493653+02 | .29298743+01 |
| .27314346+00 | .18116303+01 | .48953634-01 | .10675718+02 | .29907524+01 |
| .27401610+00 | .18118306+01 | .48471060-01 | .10866900+02 | .30545409+01 |
| .27488875+00 | .18120354+01 | .47981057-01 | .11068014+02 | .31214954+01 |
| .27576140+00 | .18122448+01 | .47482993-01 | .11279987+02 | .31919071+01 |
| .27663405+00 | .18124592+01 | .46976145-01 | .11503881+02 | .32661079+01 |
| .27750670+00 | .18126791+01 | .46459746-01 | .11740910+02 | .33444780+01 |
| .27837935+00 | .18129049+01 | .45932878-01 | .11992483+02 | .34274575+01 |
| .27925200+00 | .18131371+01 | .45394450-01 | .12260235+02 | .35155568+01 |
| .28012465+00 | .18133763+01 | .44843312-01 | .12546098+02 | .36093778+01 |
| .28099730+00 | .18136232+01 | .44278048-01 | .12852346+02 | .37096292+01 |
| .28186995+00 | .18138786+01 | .43697044-01 | .13181715+02 | .38171609+01 |
| .28274260+00 | .18141434+01 | .43098342-01 | .13537514+02 | .39330005+01 |
| .28361525+00 | .18144190+01 | .42479631-01 | .13923801+02 | .40584064+01 |
| .28429378+00 | .18146416+01 | .41982856-01 | .14248429+02 | .41635180+01 |

$$.17531477+02 = \Delta S/R$$

$$.16568420+01 = P_s/P_{\infty}$$

$$.13528868+01 = \rho_s/\rho_{\infty}$$

$$.12246716+01 = T_s/T_{\infty}$$



TABLE 60. CONICAL FLOWFIELD  $\theta_s = 7.5$  DEG;  $M_\infty = 5.0$

| $\underline{u}_s$    | $\underline{M}_\infty$ | $\underline{\theta}_s$ | $\underline{\theta}_w$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .92707051+00         | .49999920+01           | .13089969+00           | .24390927+00           |                 |
| $\underline{\theta}$ | $\underline{M}_1^*$    | $\underline{\psi}_1$   | $\underline{x}$        | $\underline{r}$ |
| .13089969+00         | .18541063+01           | .13089969+00           | .37978773+01           | .50000000+00    |
| .13439035+00         | .18541280+01           | .12749824+00           | .38525707+01           | .52088796+00    |
| .13788100+00         | .18541894+01           | .12426280+00           | .39098204+01           | .54253237+00    |
| .14137166+00         | .18542862+01           | .12117658+00           | .39697941+01           | .56498531+00    |
| .14486232+00         | .18544144+01           | .11822492+00           | .40326771+01           | .58830389+00    |
| .14835297+00         | .18545708+01           | .11539494+00           | .40986749+01           | .61255100+00    |
| .15184363+00         | .18547520+01           | .11267518+00           | .41680160+01           | .63779598+00    |
| .15533429+00         | .18549581+01           | .11005540+00           | .42409542+01           | .66411562+00    |
| .15888861+00         | .18551554+01           | .10783787+00           | .43079482+01           | .68809362+00    |
| .16144294+00         | .18553680+01           | .10568423+00           | .43781245+01           | .71302275+00    |
| .16449726+00         | .18555950+01           | .10358929+00           | .44517166+01           | .73897260+00    |
| .16755158+00         | .18558357+01           | .10154826+00           | .45289639+01           | .76602016+00    |
| .17060591+00         | .18560895+01           | .99556640+00           | .46102157+01           | .79425094+00    |
| .17366023+00         | .18563557+01           | .97610233+00           | .46957346+01           | .82376000+00    |
| .17671454+00         | .18566341+01           | .95705060+00           | .47859018+01           | .85465346+00    |
| .17933255+00         | .18568821+01           | .94102001+00           | .48671950+01           | .88232539+00    |
| .18195054+00         | .18571387+01           | .92524160+00           | .49524882+01           | .91118540+00    |
| .18456854+00         | .18574037+01           | .90969367+00           | .50421607+01           | .94132642+00    |
| .18718653+00         | .18576772+01           | .89435274+00           | .51363891+01           | .97285198+00    |
| .18980452+00         | .18579592+01           | .87919913+00           | .52357538+01           | .10058780+01    |
| .19242251+00         | .18582498+01           | .86421099+00           | .53406453+01           | .10405346+01    |
| .19504051+00         | .18585490+01           | .84936706+00           | .54515737+01           | .10769687+01    |
| .19722217+00         | .18588653+01           | .83709177+00           | .55490413+01           | .11088076+01    |
| .19940383+00         | .18590678+01           | .82488908+00           | .56514797+01           | .11421043+01    |
| .20150549+00         | .18593369+01           | .81274597+00           | .57593138+01           | .11769803+01    |
| .20370715+00         | .18596127+01           | .80064913+00           | .58730202+01           | .12135715+01    |
| .20594881+00         | .18598956+01           | .78858459+00           | .59931393+01           | .12520317+01    |
| .20813047+00         | .18601859+01           | .77693378+00           | .61202848+01           | .12925353+01    |
| .21031213+00         | .18604838+01           | .76449327+00           | .62551568+01           | .13352806+01    |
| .21209746+00         | .18607280+01           | .75484829+00           | .63691547+01           | .13712428+01    |
| .21380275+00         | .18609783+01           | .74518636+00           | .64890766+01           | .14089161+01    |
| .21554805+00         | .18612343+01           | .73549654+00           | .66154530+01           | .14484499+01    |
| .21729335+00         | .18614964+01           | .72576853+00           | .67488825+01           | .14900124+01    |
| .21903865+00         | .18617650+01           | .71599090+00           | .68900459+01           | .15337946+01    |
| .22078395+00         | .18620404+01           | .70615133+00           | .70397220+01           | .15800143+01    |
| .22252925+00         | .18623231+01           | .69623629+00           | .71988080+01           | .16289222+01    |
| .22383822+00         | .18625402+01           | .68874115+00           | .73249167+01           | .16675397+01    |
| .22514720+00         | .18627620+01           | .68116816+00           | .74573997+01           | .17079703+01    |
| .22645617+00         | .18629888+01           | .67356944+00           | .75968231+01           | .17503713+01    |
| .22776514+00         | .18632209+01           | .66587649+00           | .77438254+01           | .17949197+01    |

TABLE 60. (Concluded)

$$M_{\infty} = .49999926+01$$

$$\Theta_s = .13089969+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .22967412+00 | .18634586+01 | .65809987-01 | .78991362+01 | .18418173+01 |
| .23038309+00 | .18637024+01 | .65022914-01 | .80635890+01 | .18912946+01 |
| .23169206+00 | .18639527+01 | .64225268-01 | .82381451+01 | .19436165+01 |
| .23256471+00 | .18641234+01 | .63686959-01 | .83606733+01 | .19802281+01 |
| .23343736+00 | .18642974+01 | .63142924-01 | .84885598+01 | .20183427+01 |
| .23431001+00 | .18644749+01 | .62592668-01 | .86222224+01 | .20580752+01 |
| .23518266+00 | .18646562+01 | .62035604-01 | .87621289+01 | .20995537+01 |
| .23605531+00 | .18648414+01 | .61471388-01 | .89088043+01 | .21429219+01 |
| .23692796+00 | .18650308+01 | .60899112-01 | .90628394+01 | .21883415+01 |
| .23780061+00 | .18652247+01 | .60318150-01 | .92249057+01 | .22359958+01 |
| .23867326+00 | .18653235+01 | .60024157-01 | .93091850+01 | .22607249+01 |
| .23867326+00 | .18654235+01 | .59727699-01 | .93957672+01 | .22860931+01 |
| .23910958+00 | .18655248+01 | .59428625-01 | .94847640+01 | .23121309+01 |
| .23954591+00 | .18656275+01 | .59126843-01 | .95762993+01 | .23388719+01 |
| .23998223+00 | .18657315+01 | .58822200-01 | .96705022+01 | .23663513+01 |
| .24041856+00 | .18658371+01 | .58514558-01 | .97675130+01 | .23946071+01 |
| .24085488+00 | .18659442+01 | .58203761-01 | .98674858+01 | .24236811+01 |
| .24129121+00 | .18660528+01 | .57889655-01 | .99705831+01 | .24536176+01 |
| .24172753+00 | .18661632+01 | .57572104-01 | .10076984+02 | .24844649+01 |
| .24216386+00 | .18662753+01 | .57250820-01 | .10186884+02 | .25162760+01 |
| .24260018+00 | .18663892+01 | .56925688-01 | .10300493+02 | .25491078+01 |
| .24303650+00 | .18665051+01 | .56596417-01 | .10418041+02 | .25830226+01 |
| .24347283+00 | .18666229+01 | .56262832-01 | .10539783+02 | .26180891+01 |
| .24390915+00 | .18667430+01 | .55924639-01 | .10665997+02 | .26543820+01 |
| .24390927+00 | .18667430+01 | .55924552-01 | .10666030+02 | .26543917+01 |

$$.73516667-02 = \Delta S/R$$

$$.19563093+01 = P_s/P_{\infty}$$

$$.14913578+01 = \rho_s/\rho_{\infty}$$

$$.13117639+01 = T_s/T_{\infty}$$

TABLE 61. CONICAL FLOWFIELD  $\theta_s = 7.5 \text{ DEG}$ ;  $M_\infty = 6.0$

| $\underline{u}_s$    | $\underline{M}_\infty$ | $\underline{\theta}_s$ | $\underline{\theta}_w$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .94424485+00         | .59999759+01           | .13089969+00           | .21950683+00           |                 |
| $\underline{\theta}$ | $\underline{M}_1^*$    | $\underline{\psi}_1$   | $\underline{x}$        | $\underline{r}$ |
| .13089969+00         | .18884543+01           | .13089969+00           | .37978773+01           | .50000000+00    |
| .13351768+00         | .18884668+01           | .12833219+00           | .38458830+01           | .51656663+00    |
| .13613568+00         | .18885030+01           | .12585977+00           | .38958358+01           | .53366307+00    |
| .13875367+00         | .18885605+01           | .12347429+00           | .39478499+01           | .55132131+00    |
| .14137166+00         | .18886378+01           | .12116845+00           | .40020503+01           | .56957605+00    |
| .14398965+00         | .18887333+01           | .11893566+00           | .40585741+01           | .58846519+00    |
| .14660764+00         | .18888456+01           | .11676995+00           | .41175716+01           | .60803000+00    |
| .14922564+00         | .18889736+01           | .11466587+00           | .41792082+01           | .62831577+00    |
| .15184363+00         | .18891164+01           | .11261839+00           | .42436650+01           | .64937192+00    |
| .15446162+00         | .18892731+01           | .11062291+00           | .43111433+01           | .67125302+00    |
| .15664328+00         | .18894137+01           | .10899661+00           | .43698432+01           | .69016067+00    |
| .15882494+00         | .18895632+01           | .10740107+00           | .44309369+01           | .70972101+00    |
| .16100660+00         | .18897212+01           | .10583409+00           | .44945798+01           | .72997569+00    |
| .16318826+00         | .18898875+01           | .10429355+00           | .45609411+01           | .75097013+00    |
| .16536992+00         | .18900618+01           | .10277740+00           | .46302074+01           | .77275413+00    |
| .16755158+00         | .18902440+01           | .10128368+00           | .47025840+01           | .79538242+00    |
| .16973324+00         | .18904339+01           | .99810496-01           | .47782982+01           | .81891534+00    |
| .17191491+00         | .18906316+01           | .98355984-01           | .48576015+01           | .84341951+00    |
| .17409657+00         | .18908369+01           | .96918320-01           | .49407735+01           | .86896885+00    |
| .17584184+00         | .18910567+01           | .95779102-01           | .50103046+01           | .89021567+00    |
| .17758722+00         | .18911813+01           | .94648588-01           | .50826871+01           | .91223024+00    |
| .17933255+00         | .18913609+01           | .93525855-01           | .51581147+01           | .93506334+00    |
| .18107788+00         | .18915455+01           | .92409965-01           | .52368004+01           | .95877079+00    |
| .18282321+00         | .18917353+01           | .91299977-01           | .53189794+01           | .98341401+00    |
| .18456854+00         | .18919302+01           | .90194926-01           | .54049118+01           | .10090608+01    |
| .18631386+00         | .18921304+01           | .89093819-01           | .54948868+01           | .10357864+01    |
| .18805919+00         | .18923361+01           | .87995632-01           | .55892256+01           | .10636743+01    |
| .18980452+00         | .18925474+01           | .86899303-01           | .56882890+01           | .10928178+01    |
| .19111352+00         | .18927697+01           | .86077601-01           | .57659278+01           | .11155616+01    |
| .19242251+00         | .18928754+01           | .85255826-01           | .58466390+01           | .11391189+01    |
| .19373150+00         | .18930447+01           | .84433468-01           | .59306299+01           | .11635430+01    |
| .19504048+00         | .18932180+01           | .83610000-01           | .60181280+01           | .11888924+01    |
| .19634945+00         | .18933951+01           | .82784820-01           | .61093863+01           | .12152319+01    |
| .19765842+00         | .18935760+01           | .81957322-01           | .62046836+01           | .12426330+01    |
| .19896740+00         | .18937611+01           | .81126848-01           | .63043284+01           | .12711747+01    |
| .20027637+00         | .18939504+01           | .80292702-01           | .64086658+01           | .13009449+01    |
| .20158534+00         | .18941441+01           | .79454135-01           | .65180815+01           | .13320420+01    |
| .20245799+00         | .18942759+01           | .78892237-01           | .65940578+01           | .13535643+01    |
| .20333064+00         | .18944099+01           | .78327751-01           | .66726235+01           | .13757608+01    |
| .20420329+00         | .18945461+01           | .77760410-01           | .67539330+01           | .13986706+01    |

TABLE 61. (Concluded)

$$M_{\infty} = .59999759+01$$

$$\Theta_s = .13689969+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$      | $x$          | $r$          |
|--------------|--------------|---------------|--------------|--------------|
| .20537594+00 | .18946847+01 | .77189911-01  | .68381536+01 | .14223362+01 |
| .20594859+00 | .18948257+01 | .76615945-01  | .69254678+01 | .14468037+01 |
| .20682124+00 | .18949693+01 | .76038178-01  | .70160751+01 | .14721235+01 |
| .20769389+00 | .18951155+01 | .75456252-01  | .71101950+01 | .14983509+01 |
| .20856654+00 | .18952645+01 | .74869772-01  | .72080676+01 | .15255465+01 |
| .20943919+00 | .18954165+01 | .74278345-01  | .73099590+01 | .15537773+01 |
| .20987551+00 | .18954936+01 | .73980620-01  | .73625025+01 | .15683036+01 |
| .21031184+00 | .18955716+01 | .73681479-01  | .74161640+01 | .15831172+01 |
| .21074816+00 | .18956503+01 | .73380860-01  | .74709845+01 | .15982282+01 |
| .21118449+00 | .18957299+01 | .73078688-01  | .75270091+01 | .16136481+01 |
| .21162081+00 | .18958104+01 | .72774900-01  | .75842831+01 | .16293882+01 |
| .21205714+00 | .18958917+01 | .72469423-01  | .76428568+01 | .16454610+01 |
| .21249346+00 | .18959739+01 | .72162170-01  | .77027830+01 | .16618799+01 |
| .21292979+00 | .18960571+01 | .71853073-01  | .77641165+01 | .16786583+01 |
| .21336611+00 | .18961413+01 | .71542043-01  | .78269167+01 | .16958112+01 |
| .21380243+00 | .18962265+01 | .71228983-01  | .78912452+01 | .17133540+01 |
| .21423876+00 | .18963127+01 | .70913814-01  | .79571697+01 | .17313035+01 |
| .21467508+00 | .18964000+01 | .70596423-01  | .80247605+01 | .17496772+01 |
| .21511141+00 | .18964883+01 | .70276693-01  | .80940933+01 | .17684941+01 |
| .21554773+00 | .18965779+01 | .69954542-01  | .81652493+01 | .17877743+01 |
| .21598406+00 | .18966686+01 | .69629841-01  | .82383150+01 | .18075392+01 |
| .21642038+00 | .18967606+01 | .693002453-01 | .83133830+01 | .18278119+01 |
| .21685671+00 | .18968538+01 | .68972262-01  | .83905522+01 | .18486169+01 |
| .21729303+00 | .18969484+01 | .68639113-01  | .84699309+01 | .18699812+01 |
| .21772936+00 | .18970444+01 | .68302851-01  | .85516330+01 | .18919328+01 |
| .21816568+00 | .18971418+01 | .67963316-01  | .86357836+01 | .19145026+01 |
| .21860201+00 | .18972407+01 | .67620333-01  | .87225170+01 | .19377244+01 |
| .21903833+00 | .18973412+01 | .67273714-01  | .88119795+01 | .19616337+01 |
| .21947465+00 | .18974434+01 | .66923250-01  | .89043285+01 | .19862696+01 |
| .21950683+00 | .18974510+01 | .66897241-01  | .89112581+01 | .19881164+01 |

$$.19937813-01 = \Delta S/R$$

$$.23111075+01 = P_s/P_{\infty}$$

$$.16399253+01 = \rho_s/\rho_{\infty}$$

$$.14092761+01 = T_s/T_{\infty}$$

TABLE 62. CONICAL FLOWFIELD  $\theta_s = 7.5$  DEG;  $M_\infty = 8.0$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .96263091+00 | .79999397+01 | .13089969+00 | .19254253+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .13089969+00 | .19252257+01 | .13089969+00 | .37978773+01 | .50000000+00 |
| .13220669+00 | .19252292+01 | .12960347+00 | .38277853+01 | .50903574+00 |
| .13351768+00 | .19252385+01 | .12833189+00 | .38584358+01 | .51825269+00 |
| .13482668+00 | .19252541+01 | .12708363+00 | .38898567+01 | .52765762+00 |
| .13613568+00 | .19252754+01 | .12585746+00 | .39220770+01 | .53725768+00 |
| .13744467+00 | .19253021+01 | .12465222+00 | .39551279+01 | .54706044+00 |
| .13875367+00 | .19253342+01 | .12346680+00 | .39890416+01 | .55707377+00 |
| .14006266+00 | .19253713+01 | .12230017+00 | .40238529+01 | .56730612+00 |
| .14137166+00 | .19254135+01 | .12115134+00 | .40595986+01 | .57776638+00 |
| .14268066+00 | .19254602+01 | .12001936+00 | .40963176+01 | .58846398+00 |
| .14398965+00 | .19255115+01 | .11890334+00 | .41340515+01 | .59940889+00 |
| .14529865+00 | .19255672+01 | .11780242+00 | .41728443+01 | .61061170+00 |
| .14660764+00 | .19256273+01 | .11671578+00 | .42127430+01 | .62208369+00 |
| .14791664+00 | .19256916+01 | .11564261+00 | .42537977+01 | .63383684+00 |
| .14922564+00 | .19257600+01 | .11458216+00 | .42960617+01 | .64588391+00 |
| .15053463+00 | .19258324+01 | .11353368+00 | .43395923+01 | .65823849+00 |
| .15184363+00 | .19259087+01 | .11249645+00 | .43844502+01 | .67091507+00 |
| .15315263+00 | .19259889+01 | .11146978+00 | .44307014+01 | .68392926+00 |
| .15446162+00 | .19260728+01 | .11045296+00 | .44784159+01 | .69729768+00 |
| .15577062+00 | .19261606+01 | .10944534+00 | .45276693+01 | .71103814+00 |
| .15707961+00 | .19262520+01 | .10844626+00 | .45785425+01 | .72516979+00 |
| .15838861+00 | .19263472+01 | .10745504+00 | .46311237+01 | .73971333+00 |
| .15969761+00 | .19264460+01 | .10647105+00 | .46855075+01 | .75469095+00 |
| .16100660+00 | .19265485+01 | .10549365+00 | .47417964+01 | .77012675+00 |
| .16231560+00 | .19266547+01 | .10452219+00 | .48001012+01 | .78604659+00 |
| .16362460+00 | .19267645+01 | .10355602+00 | .48605425+01 | .80247871+00 |
| .16493360+00 | .19268798+01 | .10259452+00 | .49220883+01 | .81937306+00 |
| .16624259+00 | .19269916+01 | .10163691+00 | .49846836+01 | .83652383+00 |
| .16755159+00 | .19271095+01 | .10068371+00 | .50483329+01 | .85390490+00 |
| .16886058+00 | .19272341+01 | .10000041+00 | .51130333+01 | .87149043+00 |
| .16977324+00 | .19273668+01 | .10036516+00 | .51787225+01 | .88936631+00 |
| .17068591+00 | .19275071+01 | .99730968+01 | .52454921+01 | .90739851+00 |
| .17149857+00 | .19276531+01 | .99097611+01 | .53133600+01 | .92567132+00 |
| .17231124+00 | .19278041+01 | .98464873+01 | .53822497+01 | .94416478+00 |
| .17322390+00 | .19279601+01 | .97832529+01 | .54521607+01 | .96287542+00 |
| .17403656+00 | .19281211+01 | .97200355+01 | .55230936+01 | .98176988+00 |
| .17484921+00 | .19282871+01 | .96568102+01 | .55940398+01 | .99201444+00 |
| .17566186+00 | .19284581+01 | .95935544+01 | .56659700+01 | .99567197+00 |
| .17647451+00 | .19286341+01 | .95302426+01 | .57388721+01 | .99718345+00 |
| .17728716+00 | .19288151+01 | .94668452+01 | .58127359+01 | .99738011+00 |

TABLE 62. (Concluded)

$$M_{\infty} = .79999397+01$$

$$\Theta_s = .13089969+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .17671451+00 | .19280781+01 | .94033366-01 | .56187415+01 | .10033794+01 |
| .17758716+00 | .19281011+01 | .93396863-01 | .56823558+01 | .10198571+01 |
| .17845980+00 | .19282863+01 | .92758643-01 | .57481265+01 | .10368400+01 |
| .17933245+00 | .19283936+01 | .92118379-01 | .58161806+01 | .10543570+01 |
| .18020510+00 | .19285033+01 | .91475729-01 | .58866578+01 | .10724397+01 |
| .18107775+00 | .19286154+01 | .90830328-01 | .59597086+01 | .10911224+01 |
| .18195040+00 | .19287299+01 | .90181796-01 | .60354987+01 | .11104426+01 |
| .18282305+00 | .19288470+01 | .89529710-01 | .61142092+01 | .11304412+01 |
| .18369570+00 | .19289668+01 | .88873640-01 | .61960405+01 | .11511635+01 |
| .18456835+00 | .19290893+01 | .88213092-01 | .62812123+01 | .11726590+01 |
| .18544100+00 | .19292148+01 | .87547561-01 | .63699688+01 | .11949827+01 |
| .18587732+00 | .19292786+01 | .87212747-01 | .64157746+01 | .12064738+01 |
| .18631365+00 | .19293433+01 | .86876478-01 | .64625805+01 | .12181953+01 |
| .18674997+00 | .19294088+01 | .86538669-01 | .65104250+01 | .12301558+01 |
| .18718630+00 | .19294751+01 | .86199235-01 | .65593493+01 | .12423646+01 |
| .18762262+00 | .19295422+01 | .85858094-01 | .66093969+01 | .12548313+01 |
| .18805895+00 | .19296102+01 | .85515156-01 | .66606135+01 | .12675663+01 |
| .18849527+00 | .19296791+01 | .85170327-01 | .67130482+01 | .12805804+01 |
| .18893160+00 | .19297490+01 | .84823504-01 | .67667528+01 | .12938853+01 |
| .18936792+00 | .19298198+01 | .84474586-01 | .68217826+01 | .13074932+01 |
| .18980424+00 | .19298916+01 | .84123459-01 | .68781965+01 | .13214174+01 |
| .19024057+00 | .19299644+01 | .83770007-01 | .69360577+01 | .13356719+01 |
| .19067689+00 | .19300383+01 | .83414106-01 | .69954326+01 | .13502714+01 |
| .19111322+00 | .19301133+01 | .83055621-01 | .70563940+01 | .13652321+01 |
| .19154954+00 | .19301894+01 | .82694413-01 | .71190183+01 | .13805711+01 |
| .19198587+00 | .19302666+01 | .82330339-01 | .71833885+01 | .13963066+01 |
| .19242219+00 | .19303451+01 | .81963230-01 | .72495931+01 | .14124585+01 |
| .19285853+00 | .19304250+01 | .81614270-01 | .72681876+01 | .14169891+01 |

$$.73220268-01 = \Delta S/R$$

$$.31914099+01 = P_s/P_{\infty}$$

$$.19483342+01 = \rho_s/\rho_{\infty}$$

$$.16380197+01 = T_s/T_{\infty}$$



TABLE 63. CONICAL FLOWFIELD  $\theta_s = 7.5 \text{ DEG}$ ;  $M_\infty = 10.0$

| $\underline{u}_s$    | $\underline{M}_\infty$ | $\underline{\theta}_s$ | $\underline{\theta}_w$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .97170140+00         | .99999969+01           | .13089969+00           | .17870819+00           |                 |
| $\underline{\theta}$ | $\underline{M}_1^*$    | $\underline{\psi}_1$   | $\underline{x}$        | $\underline{r}$ |
| .13089969+00         | .19433663+01           | .13089969+00           | .37978773+01           | .50000000+00    |
| .13177235+00         | .19433678+01           | .13083273+00           | .38210376+01           | .50644179+00    |
| .13264502+00         | .19433722+01           | .12917685+00           | .38446396+01           | .51298441+00    |
| .13351768+00         | .19433793+01           | .12833160+00           | .38686960+01           | .51963080+00    |
| .13439035+00         | .19433891+01           | .12749652+00           | .38932204+01           | .52638401+00    |
| .13526301+00         | .19434016+01           | .12667119+00           | .39182267+01           | .53324722+00    |
| .13613568+00         | .19434165+01           | .12585521+00           | .39437298+01           | .54022373+00    |
| .13700834+00         | .19434340+01           | .12504818+00           | .39697448+01           | .54731704+00    |
| .13788100+00         | .19434539+01           | .12424972+00           | .39962877+01           | .55453070+00    |
| .13875367+00         | .19434761+01           | .12345948+00           | .40233754+01           | .56186853+00    |
| .13962633+00         | .19435006+01           | .12267709+00           | .40510256+01           | .56933446+00    |
| .14049900+00         | .19435274+01           | .12190222+00           | .40792565+01           | .57693265+00    |
| .14137166+00         | .19435564+01           | .12113454+00           | .41080876+01           | .58466739+00    |
| .14224432+00         | .19435876+01           | .12037373+00           | .41375395+01           | .59254329+00    |
| .14311699+00         | .19436208+01           | .11961947+00           | .41676333+01           | .60056508+00    |
| .14398965+00         | .19436562+01           | .11887146+00           | .41983914+01           | .60873772+00    |
| .14486232+00         | .19436936+01           | .11812940+00           | .42298376+01           | .61706650+00    |
| .14573498+00         | .19437330+01           | .11739301+00           | .42619967+01           | .62555695+00    |
| .14660764+00         | .19437745+01           | .11666199+00           | .42948950+01           | .63421484+00    |
| .14748031+00         | .19438179+01           | .11593608+00           | .43285599+01           | .64304629+00    |
| .14835297+00         | .19438633+01           | .11521498+00           | .43630209+01           | .65205777+00    |
| .14922564+00         | .19439106+01           | .11449844+00           | .43983085+01           | .66125603+00    |
| .15009830+00         | .19439598+01           | .11378617+00           | .44344551+01           | .67064819+00    |
| .15097097+00         | .19440109+01           | .11307792+00           | .44714956+01           | .68024194+00    |
| .15184363+00         | .19440639+01           | .11237342+00           | .45094664+01           | .69004524+00    |
| .15271629+00         | .19441188+01           | .11167240+00           | .45484060+01           | .70006656+00    |
| .15358896+00         | .19441756+01           | .11097461+00           | .45883558+01           | .71031491+00    |
| .15446162+00         | .19442343+01           | .11027977+00           | .46293591+01           | .72079982+00    |
| .15533429+00         | .19442949+01           | .10958763+00           | .46714625+01           | .73153142+00    |
| .15620695+00         | .19443573+01           | .10889792+00           | .47147159+01           | .74252054+00    |
| .15707961+00         | .19444216+01           | .10821036+00           | .47591716+01           | .75377862+00    |
| .15795228+00         | .19444879+01           | .10752468+00           | .48048864+01           | .76531797+00    |
| .15882494+00         | .19445561+01           | .10684061+00           | .48519207+01           | .77715167+00    |
| .15969761+00         | .19446262+01           | .10615787+00           | .49003386+01           | .78929364+00    |
| .16057027+00         | .19446983+01           | .10547617+00           | .49502103+01           | .80175900+00    |
| .16144294+00         | .19447724+01           | .10479521+00           | .50016094+01           | .81456370+00    |
| .16231560+00         | .19448485+01           | .10411469+00           | .50546166+01           | .82772508+00    |
| .16318826+00         | .19449267+01           | .10343429+00           | .51093177+01           | .84126168+00    |
| .16406093+00         | .19450069+01           | .10275370+00           | .51658071+01           | .85519368+00    |
| .16493358+00         | .19450896+01           | .10207258+00           | .52241842+01           | .86954244+00    |

TABLE 63. (Concluded)

$$M_{\infty} = .99999909+01$$

$$\Theta_s = .13089969+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .16580623+00 | .19451745+01 | .10139056+00 | .52845602+01 | .88433179+00 |
| .16667888+00 | .19452617+01 | .10070730+00 | .53470542+01 | .89958716+00 |
| .16755152+00 | .19453511+01 | .10002240+00 | .54117960+01 | .91533631+00 |
| .16842417+00 | .19454429+01 | .99335438-01 | .54789271+01 | .93160935+00 |
| .16929682+00 | .19455372+01 | .98645987-01 | .55486031+01 | .94843942+00 |
| .17016947+00 | .19456339+01 | .97953586-01 | .56209942+01 | .96586269+00 |
| .17104212+00 | .19457334+01 | .97257746-01 | .56962883+01 | .98391896+00 |
| .17191477+00 | .19458354+01 | .96557930-01 | .57746927+01 | .10026522+01 |
| .17278742+00 | .19459404+01 | .95853571-01 | .58564377+01 | .10221109+01 |
| .17322375+00 | .19459945+01 | .95499497-01 | .58986412+01 | .10321289+01 |
| .17366007+00 | .19460483+01 | .95144050-01 | .59417778+01 | .10423490+01 |
| .17409639+00 | .19461034+01 | .94787147-01 | .59858845+01 | .10527789+01 |
| .17453272+00 | .19461593+01 | .94428698-01 | .60309995+01 | .10634266+01 |
| .17496904+00 | .19462160+01 | .94068604-01 | .60771647+01 | .10743011+01 |
| .17540537+00 | .19462736+01 | .93706770-01 | .61244231+01 | .10854112+01 |
| .17584169+00 | .19463320+01 | .93343092-01 | .61720216+01 | .10967669+01 |
| .17627802+00 | .19463913+01 | .92977464-01 | .62224092+01 | .11083784+01 |
| .17671434+00 | .19464516+01 | .92609761-01 | .62732386+01 | .11202567+01 |
| .17715067+00 | .19465128+01 | .92239870-01 | .63253658+01 | .11324136+01 |
| .17758699+00 | .19465749+01 | .91867665-01 | .63788511+01 | .11448615+01 |
| .17802332+00 | .19466381+01 | .91493001-01 | .64337584+01 | .11576140+01 |
| .17845964+00 | .19467023+01 | .91115737-01 | .64901569+01 | .11706855+01 |
| .17870819+00 | .19467393+01 | .90899609-01 | .65229788+01 | .11782799+01 |

$$.16549805+00 = \Delta S/R$$

$$.43048638+01 = P_s/P_{\infty}$$

$$.22476732+01 = \rho_s/\rho_{\infty}$$

$$.19157649+01 = T_s/T_{\infty}$$



TABLE 64. CONICAL FLOWFIELD  $\theta_s = 7.5 \text{ DEG}$ ;  $M_\infty = 12.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .97774084+00 | .12499994+02 | .13089969+00 | .16921159+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .13089969+00 | .19554450+01 | .13089969+00 | .37978773+01 | .50000000+00 |
| .13177235+00 | .19554465+01 | .13003272+00 | .38242643+01 | .50686946+00 |
| .13264502+00 | .19554509+01 | .12917675+00 | .38512231+01 | .51386284+00 |
| .13351768+00 | .19554580+01 | .12833127+00 | .38787729+01 | .52098430+00 |
| .13439035+00 | .19554679+01 | .12749575+00 | .39069341+01 | .52823818+00 |
| .13526301+00 | .19554804+01 | .12666971+00 | .39357279+01 | .53562901+00 |
| .13613568+00 | .19554955+01 | .12585268+00 | .39651771+01 | .54316165+00 |
| .13700834+00 | .19555131+01 | .12504422+00 | .39953052+01 | .55084112+00 |
| .13788100+00 | .19555332+01 | .12424380+00 | .40261372+01 | .55867266+00 |
| .13875367+00 | .19555556+01 | .12345125+00 | .40576992+01 | .56666188+00 |
| .13962633+00 | .19555804+01 | .12266591+00 | .40900195+01 | .57481470+00 |
| .14049900+00 | .19556075+01 | .12188748+00 | .41231270+01 | .58313730+00 |
| .14137166+00 | .19556368+01 | .12111557+00 | .41570534+01 | .59163625+00 |
| .14224432+00 | .19556684+01 | .12034981+00 | .41918313+01 | .60031850+00 |
| .14311699+00 | .19557022+01 | .11958982+00 | .42274960+01 | .60919143+00 |
| .14398965+00 | .19557382+01 | .11883525+00 | .42640843+01 | .61826275+00 |
| .14486232+00 | .19557762+01 | .11808574+00 | .43016356+01 | .62754069+00 |
| .14573498+00 | .19558164+01 | .11734094+00 | .43401918+01 | .63703407+00 |
| .14660764+00 | .19558587+01 | .11660050+00 | .43797979+01 | .64675221+00 |
| .14748031+00 | .19559031+01 | .11586408+00 | .44205009+01 | .65670495+00 |
| .14835297+00 | .19559496+01 | .11513134+00 | .44623522+01 | .66690294+00 |
| .14922564+00 | .19559982+01 | .11440193+00 | .45054059+01 | .67735740+00 |
| .15009830+00 | .19560488+01 | .11367550+00 | .45497198+01 | .68808034+00 |
| .15097097+00 | .19561016+01 | .11295172+00 | .45953564+01 | .69908469+00 |
| .15184363+00 | .19561564+01 | .11223022+00 | .46423830+01 | .71038434+00 |
| .15271629+00 | .19561846+01 | .11187022+00 | .46664397+01 | .71614945+00 |
| .15271629+00 | .19562133+01 | .11151066+00 | .46908712+01 | .72199405+00 |
| .15315263+00 | .19562426+01 | .11115150+00 | .47156874+01 | .72792011+00 |
| .15358896+00 | .19562724+01 | .11079268+00 | .47408987+01 | .73392980+00 |
| .15402529+00 | .19563027+01 | .11043416+00 | .47665153+01 | .74002522+00 |
| .15446162+00 | .19563335+01 | .11007589+00 | .47925486+01 | .74620872+00 |
| .15489795+00 | .19563649+01 | .10971783+00 | .48190103+01 | .75248267+00 |
| .15533429+00 | .19563969+01 | .10935993+00 | .48459120+01 | .75884948+00 |
| .15577062+00 | .19564294+01 | .10900214+00 | .48732665+01 | .76531173+00 |
| .15620695+00 | .19564624+01 | .10864441+00 | .49010866+01 | .77187206+00 |
| .15664328+00 | .19564960+01 | .10828668+00 | .49293859+01 | .77853326+00 |
| .15707961+00 | .19565302+01 | .10792891+00 | .49581790+01 | .78529830+00 |
| .15751595+00 | .19565649+01 | .10757104+00 | .49874803+01 | .79217012+00 |
| .15795227+00 | .19566004+01 | .10721303+00 | .50173046+01 | .79915171+00 |
| .15838860+00 | .19566365+01 | .10685480+00 | .50476688+01 | .80624655+00 |

TABLE 64. (Concluded)

$$M_{\infty} = .12499994 + 02$$

$$\Theta_s = .13089969 + 00$$

| $\underline{\Theta}$ | $\underline{M}_1^*$ | $\underline{\psi}_1$ | $\underline{x}$ | $\underline{r}$ |
|----------------------|---------------------|----------------------|-----------------|-----------------|
| .15882492+00         | .19566731+01        | .10649632+00         | .50785899+01    | .81345807+00    |
| .15926125+00         | .19567103+01        | .10613751+00         | .51100851+01    | .82078981+00    |
| .15969757+00         | .19567482+01        | .10577832+00         | .51421737+01    | .82824563+00    |
| .16013389+00         | .19567866+01        | .10541868+00         | .51748744+01    | .83582938+00    |
| .16057022+00         | .19568257+01        | .10505855+00         | .52082077+01    | .84354518+00    |
| .16100654+00         | .19568654+01        | .10469783+00         | .52421949+01    | .85139737+00    |
| .16144287+00         | .19569057+01        | .10433649+00         | .52768582+01    | .85939045+00    |
| .16187919+00         | .19569467+01        | .10397443+00         | .53122215+01    | .86752921+00    |
| .16231552+00         | .19569883+01        | .10361160+00         | .53483089+01    | .87581859+00    |
| .16275184+00         | .19570306+01        | .10324792+00         | .53851474+01    | .88426398+00    |
| .16318817+00         | .19570736+01        | .10288330+00         | .54227635+01    | .89287075+00    |
| .16362449+00         | .19571173+01        | .10251768+00         | .54611871+01    | .90164492+00    |
| .16406082+00         | .19571617+01        | .10215097+00         | .55004480+01    | .91059249+00    |
| .16449714+00         | .19572068+01        | .10178307+00         | .55405791+01    | .91972007+00    |
| .16493347+00         | .19572526+01        | .10141391+00         | .55816138+01    | .92903438+00    |
| .16536979+00         | .19572992+01        | .10104339+00         | .56235890+01    | .93854286+00    |
| .16580611+00         | .19573466+01        | .10067142+00         | .56665428+01    | .94825307+00    |
| .16624244+00         | .19573947+01        | .10029788+00         | .57105160+01    | .95817327+00    |
| .16667876+00         | .19574437+01        | .99922670+01         | .57555518+01    | .96831205+00    |
| .16711509+00         | .19574936+01        | .99545680+01         | .58016960+01    | .97867859+00    |
| .16755141+00         | .19575442+01        | .99166790+01         | .58489981+01    | .98928279+00    |
| .16798774+00         | .19575958+01        | .98785872+01         | .58975102+01    | .10001350+01    |
| .16842406+00         | .19576483+01        | .98402794+01         | .59472880+01    | .10112464+01    |
| .16886039+00         | .19577017+01        | .98017422+01         | .59983916+01    | .10226289+01    |
| .16921159+00         | .19577454+01        | .97705454+01         | .60405324+01    | .10319965+01    |

$$.32525519+00 = \Delta S/R$$

$$.60305715+01 = P_s/P_{\infty}$$

$$.25804855+01 = \rho_s/\rho_{\infty}$$

$$.23369911+01 = T_s/T_{\infty}$$

TABLE 65. CONICAL FLOWFIELD  $\theta_s = 7.5 \text{ DEG}$ ;  $M_\infty = 15.0$

| $u_s$        | $M_\infty$    | $\theta_s$   | $\theta_w$   |              |
|--------------|---------------|--------------|--------------|--------------|
| .98111153+00 | .149999779+02 | .13089969+00 | .16378697+00 |              |
| $\theta$     | $M_1^*$       | $\psi_1$     | $x$          | $r$          |
| .13089969+00 | .19621863+01  | .13089969+00 | .37978773+01 | .50000000+00 |
| .13177235+00 | .19621877+01  | .13083271+00 | .38266982+01 | .50719203+00 |
| .13264502+00 | .19621921+01  | .12917667+00 | .38562004+01 | .51452695+00 |
| .13351768+00 | .19621993+01  | .12833099+00 | .38864092+01 | .52200998+00 |
| .13439035+00 | .19622092+01  | .12749511+00 | .39173516+01 | .52964668+00 |
| .13526301+00 | .19622218+01  | .12666847+00 | .39490559+01 | .53744289+00 |
| .13613568+00 | .19622370+01  | .12585057+00 | .39815523+01 | .54540478+00 |
| .13700834+00 | .19622547+01  | .12504090+00 | .40148727+01 | .55353891+00 |
| .13788100+00 | .19622748+01  | .12423897+00 | .40490507+01 | .56185217+00 |
| .13875367+00 | .19622974+01  | .12344432+00 | .40841223+01 | .57035189+00 |
| .13962633+00 | .19623224+01  | .12265650+00 | .41201257+01 | .57904585+00 |
| .14049900+00 | .19623497+01  | .12187506+00 | .41571013+01 | .58794229+00 |
| .14137166+00 | .19623793+01  | .12109956+00 | .41950924+01 | .59705001+00 |
| .14224432+00 | .19624112+01  | .12037139+00 | .42344830+01 | .60638598+00 |
| .14311699+00 | .19624454+01  | .11969465+00 | .42743089+01 | .61593726+00 |
| .14398965+00 | .19624817+01  | .11904405+00 | .43156360+01 | .62573739+00 |
| .14486232+00 | .19625208+01  | .11842604+00 | .43581830+01 | .63579006+00 |
| .14573498+00 | .19625611+01  | .11783061+00 | .44020103+01 | .64610751+00 |
| .14660764+00 | .19626024+01  | .11729654+00 | .44471829+01 | .65670276+00 |
| .14748031+00 | .19626449+01  | .11682380+00 | .44937708+01 | .66758984+00 |
| .14835297+00 | .19626893+01  | .11640451+00 | .45418494+01 | .67878386+00 |
| .14922564+00 | .19627357+01  | .11603854+00 | .45914995+01 | .69030099+00 |
| .15009830+00 | .19627840+01  | .11572594+00 | .46428096+01 | .70215885+00 |
| .15097097+00 | .19628343+01  | .11545945+00 | .46958748+01 | .71437641+00 |
| .15184363+00 | .19628861+01  | .11523378+00 | .47507988+01 | .72697429+00 |
| .15271629+00 | .19629393+01  | .11504552+00 | .47507988+01 | .72697429+00 |
| .15358895+00 | .19629937+01  | .11489337+00 | .47789937+01 | .73342275+00 |
| .15446161+00 | .19630492+01  | .11477628+00 | .48076944+01 | .73997486+00 |
| .15533427+00 | .19631057+01  | .11469117+00 | .48369194+01 | .74663366+00 |

TABLE 65. (Concluded)

$$M_{\infty} = .14999979+02$$

$$\Theta_s = .13089969+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .15358896+00 | .19635282+01 | .11063299+00 | .48666844+01 | .75340245+00 |
| .15402528+00 | .19630598+01 | .11026469+00 | .48970060+01 | .76028453+00 |
| .15446161+00 | .19630919+01 | .10989618+00 | .49279028+01 | .76728354+00 |
| .15489793+00 | .19631247+01 | .10952741+00 | .49593937+01 | .77440325+00 |
| .15533426+00 | .19631581+01 | .10915831+00 | .49914986+01 | .78164756+00 |
| .15577058+00 | .19631921+01 | .10878881+00 | .50242380+01 | .78902054+00 |
| .15620691+00 | .19632267+01 | .10841884+00 | .50576342+01 | .79652652+00 |
| .15664323+00 | .19632620+01 | .10804833+00 | .50917098+01 | .80416997+00 |
| .15707956+00 | .19632979+01 | .10767719+00 | .51264892+01 | .81195571+00 |
| .15751588+00 | .19633345+01 | .10730535+00 | .51619977+01 | .81988867+00 |
| .15795220+00 | .19633717+01 | .10693274+00 | .51982622+01 | .82797413+00 |
| .15838853+00 | .19634096+01 | .10655926+00 | .52353107+01 | .83621757+00 |
| .15882485+00 | .19634483+01 | .10618483+00 | .52731737+01 | .84462497+00 |
| .15926118+00 | .19634876+01 | .10580936+00 | .53118827+01 | .85320248+00 |
| .15969750+00 | .19635276+01 | .10543275+00 | .53514705+01 | .86195652+00 |
| .16013383+00 | .19635684+01 | .10505491+00 | .53919733+01 | .87089413+00 |
| .16057015+00 | .19636100+01 | .10467574+00 | .54334285+01 | .88002260+00 |
| .16100648+00 | .19636523+01 | .10429513+00 | .54758756+01 | .88934963+00 |
| .16144280+00 | .19636954+01 | .10391296+00 | .55193574+01 | .89888355+00 |
| .16187913+00 | .19637393+01 | .10352913+00 | .55639187+01 | .90863304+00 |
| .16231545+00 | .19637840+01 | .10314349+00 | .56096084+01 | .91860761+00 |
| .16275178+00 | .19638296+01 | .10275594+00 | .56564771+01 | .92881706+00 |
| .16318810+00 | .19638761+01 | .10236632+00 | .57045802+01 | .93927215+00 |
| .16362442+00 | .19639234+01 | .10197450+00 | .57539762+01 | .94998416+00 |
| .16378697+00 | .19639413+01 | .10182794+00 | .57727200+01 | .95404280+00 |

$$.51727065+00 = \Delta S/R$$

$$.81314269+01 = P_s/P_{\infty}$$

$$.28594867+01 = \rho_s/\rho_{\infty}$$

$$.28440645+01 = T_s/T_{\infty}$$

TABLE 66. CONICAL FLOWFIELD  $\theta_s = 7.5$  DEG;  $M_\infty = 17.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .98317853+00 | .17500000+02 | .13089969+00 | .16040956+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .13089969+00 | .19663202+01 | .13089969+00 | .37978773+01 | .50000000+00 |
| .13133602+00 | .19663206+01 | .13046479+00 | .38131132+01 | .50369857+00 |
| .13177235+00 | .19663217+01 | .13003270+00 | .38285379+01 | .50743589+00 |
| .13220869+00 | .19663235+01 | .12960333+00 | .38441553+01 | .51121271+00 |
| .13264502+00 | .19663261+01 | .12917666+00 | .38599691+01 | .51502981+00 |
| .13308135+00 | .19663293+01 | .12875244+00 | .38759833+01 | .51888799+00 |
| .13351768+00 | .19663333+01 | .12833077+00 | .38922017+01 | .52278801+00 |
| .13395401+00 | .19663379+01 | .12791151+00 | .39086287+01 | .52673076+00 |
| .13439035+00 | .19663432+01 | .12749458+00 | .39252683+01 | .53071706+00 |
| .13482668+00 | .19663492+01 | .12707993+00 | .39421253+01 | .53474784+00 |
| .13526301+00 | .19663558+01 | .12666746+00 | .39592039+01 | .53882395+00 |
| .13569934+00 | .19663631+01 | .12625713+00 | .39765090+01 | .54294641+00 |
| .13613568+00 | .19663711+01 | .12584805+00 | .39940452+01 | .54711609+00 |
| .13657201+00 | .19663796+01 | .12544256+00 | .40118177+01 | .55133406+00 |
| .13700834+00 | .19663888+01 | .12503819+00 | .40298316+01 | .55560133+00 |
| .13744467+00 | .19663986+01 | .12463569+00 | .40480922+01 | .55991895+00 |
| .13788100+00 | .19664091+01 | .12423497+00 | .40666049+01 | .56428801+00 |
| .13831734+00 | .19664201+01 | .12383599+00 | .40853753+01 | .56870964+00 |
| .13875367+00 | .19664318+01 | .12343868+00 | .41044095+01 | .57318502+00 |
| .13918900+00 | .19664440+01 | .12304298+00 | .41237126+01 | .57771536+00 |
| .13962633+00 | .19664569+01 | .12264802+00 | .41432936+01 | .58230188+00 |
| .14006266+00 | .19664703+01 | .12225615+00 | .41631560+01 | .58694588+00 |
| .14049900+00 | .19664843+01 | .12186691+00 | .41833079+01 | .59164872+00 |
| .14093533+00 | .19664989+01 | .12147503+00 | .42037557+01 | .59641170+00 |
| .14137166+00 | .19665141+01 | .12108646+00 | .42245070+01 | .60123633+00 |
| .14180799+00 | .19665299+01 | .12069914+00 | .42455691+01 | .60612403+00 |
| .14224432+00 | .19665462+01 | .12031301+00 | .42669496+01 | .61107631+00 |
| .14268066+00 | .19665632+01 | .11992801+00 | .42886667+01 | .61609479+00 |
| .14311699+00 | .19665807+01 | .11954409+00 | .43106984+01 | .62118107+00 |
| .14355332+00 | .19665987+01 | .11916119+00 | .43330839+01 | .62633691+00 |
| .14398965+00 | .19666174+01 | .11877924+00 | .43558217+01 | .63156403+00 |
| .14442598+00 | .19666366+01 | .11839820+00 | .43789209+01 | .63686421+00 |
| .14486232+00 | .19666564+01 | .11801800+00 | .44023916+01 | .64223941+00 |
| .14529865+00 | .19666767+01 | .11763858+00 | .44262437+01 | .64769160+00 |
| .14573498+00 | .19666976+01 | .11725990+00 | .44504875+01 | .65322278+00 |
| .14617131+00 | .19667191+01 | .11688188+00 | .44751340+01 | .65883513+00 |
| .14660764+00 | .19667412+01 | .11650447+00 | .45001943+01 | .66453079+00 |
| .14704398+00 | .19667638+01 | .11612761+00 | .45256806+01 | .67031219+00 |
| .14748031+00 | .19667870+01 | .11575124+00 | .45516046+01 | .67618157+00 |
| .14791664+00 | .19668108+01 | .11537530+00 | .45779794+01 | .68214152+00 |

TABLE 66. (Concluded)

| $M_{\infty} = .17500000+02$ |              | $\Theta_s = .13089969+00$ |              |              |
|-----------------------------|--------------|---------------------------|--------------|--------------|
| $\Theta$                    | $M_1^*$      | $\psi_1$                  | $x$          | $r$          |
| .14835297+00                | .19668351+01 | .11499973+00              | .46048185+01 | .68819465+00 |
| .14878931+00                | .19668661+01 | .11462447+00              | .46321355+01 | .69434363+00 |
| .14922564+00                | .19668856+01 | .11424944+00              | .46599452+01 | .70059135+00 |
| .14966197+00                | .19669117+01 | .11387460+00              | .46882629+01 | .70694074+00 |
| .15009830+00                | .19669384+01 | .11349987+00              | .47171640+01 | .71339482+00 |
| .15053463+00                | .19669657+01 | .11312519+00              | .47464857+01 | .71995694+00 |
| .15097097+00                | .19669936+01 | .11275049+00              | .47764252+01 | .72663043+00 |
| .15140730+00                | .19670221+01 | .11237569+00              | .48069411+01 | .73341887+00 |
| .15184362+00                | .19670513+01 | .11200074+00              | .48380516+01 | .74032579+00 |
| .15227995+00                | .19670812+01 | .11162557+00              | .48697779+01 | .74735531+00 |
| .15271627+00                | .19671118+01 | .11125008+00              | .49021407+01 | .75451142+00 |
| .15315260+00                | .19671429+01 | .11087421+00              | .49351625+01 | .76179844+00 |
| .15358892+00                | .19671747+01 | .11049788+00              | .49688665+01 | .76922087+00 |
| .15402525+00                | .19672072+01 | .11012101+00              | .50032779+01 | .77678358+00 |
| .15446157+00                | .19672403+01 | .10974352+00              | .50384221+01 | .78449142+00 |
| .15489789+00                | .19672741+01 | .10936531+00              | .50743265+01 | .79234967+00 |
| .15533422+00                | .19673086+01 | .10898631+00              | .51110201+01 | .80036394+00 |
| .15577054+00                | .19673437+01 | .10860641+00              | .51485338+01 | .80854008+00 |
| .15620687+00                | .19673796+01 | .10822553+00              | .51868996+01 | .81688432+00 |
| .15664319+00                | .19674162+01 | .10784356+00              | .52261518+01 | .82540315+00 |
| .15707952+00                | .19674535+01 | .10746041+00              | .52663270+01 | .83410361+00 |
| .15751584+00                | .19674915+01 | .10707595+00              | .53074636+01 | .84299305+00 |
| .15795217+00                | .19675304+01 | .10669099+00              | .53496022+01 | .85207921+00 |
| .15838849+00                | .19675700+01 | .10630269+00              | .53927869+01 | .86137049+00 |
| .15882482+00                | .19676104+01 | .10591364+00              | .54370642+01 | .87087576+00 |
| .15926114+00                | .19676516+01 | .10552281+00              | .54824839+01 | .88060448+00 |
| .15969747+00                | .19676937+01 | .10513006+00              | .55290988+01 | .89056673+00 |
| .16013379+00                | .19677366+01 | .10473524+00              | .55769465+01 | .90077344+00 |
| .16046956+00                | .19677802+01 | .10444856+00              | .56078935+01 | .90735558+00 |

$$.72612706+00 = \Delta S/R$$

$$.10609522+02 = P_s/P_{\infty}$$

$$.30650359+01 = \rho_s/\rho_{\infty}$$

$$.34390273+01 = T_s/T_{\infty}$$



TABLE 67. CONICAL FLOWFIELD  $\theta_s = 7.5 \text{ DEG}$ ;  $M_\infty = 20.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .98453501+00 | .19999554+02 | .13089969+00 | .15816997+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .13089969+00 | .19690331+01 | .13089969+00 | .37978773+01 | .50000000+00 |
| .13133602+00 | .19690335+01 | .13046479+00 | .38138056+01 | .50379003+00 |
| .13177235+00 | .19690346+01 | .13003269+00 | .38279401+01 | .50762172+00 |
| .13220869+00 | .19690364+01 | .12960331+00 | .38462852+01 | .51149595+00 |
| .13264502+00 | .19690390+01 | .12917655+00 | .38628452+01 | .51541356+00 |
| .13308135+00 | .19690422+01 | .12875234+00 | .38796246+01 | .51937547+00 |
| .13351768+00 | .19690462+01 | .12833059+00 | .38966281+01 | .52338254+00 |
| .13395401+00 | .19690508+01 | .12791122+00 | .39138605+01 | .52743580+00 |
| .13439035+00 | .19690562+01 | .12749417+00 | .39313266+01 | .53153616+00 |
| .13482668+00 | .19690621+01 | .12707933+00 | .39490317+01 | .53568468+00 |
| .13526301+00 | .19690688+01 | .12666666+00 | .39669809+01 | .53988236+00 |
| .13569934+00 | .19690761+01 | .12625606+00 | .39851798+01 | .54413030+00 |
| .13613568+00 | .19690840+01 | .12584747+00 | .40036337+01 | .54842955+00 |
| .13657201+00 | .19690926+01 | .12544081+00 | .40223488+01 | .55278132+00 |
| .13700834+00 | .19691018+01 | .12503662+00 | .40413309+01 | .55718676+00 |
| .13744467+00 | .19691117+01 | .12463303+00 | .40605862+01 | .56164709+00 |
| .13788100+00 | .19691221+01 | .12423176+00 | .40801212+01 | .56616355+00 |
| .13831734+00 | .19691332+01 | .12383215+00 | .40999425+01 | .57073748+00 |
| .13875367+00 | .19691449+01 | .12343414+00 | .41200571+01 | .57537022+00 |
| .13919000+00 | .19691572+01 | .12303766+00 | .41404720+01 | .58006315+00 |
| .13962633+00 | .19691701+01 | .12264264+00 | .41611947+01 | .58481772+00 |
| .14006266+00 | .19691835+01 | .12224901+00 | .41822328+01 | .58963543+00 |
| .14049900+00 | .19691975+01 | .12185672+00 | .42035944+01 | .59451786+00 |
| .14093533+00 | .19692123+01 | .12146570+00 | .42252874+01 | .59946653+00 |
| .14137166+00 | .19692276+01 | .12107589+00 | .42473208+01 | .60448321+00 |
| .14180799+00 | .19692435+01 | .12068721+00 | .42697033+01 | .60956957+00 |
| .14224432+00 | .19692599+01 | .12029962+00 | .42924439+01 | .61472738+00 |
| .14268066+00 | .19692769+01 | .11991304+00 | .43155525+01 | .61995856+00 |
| .14311699+00 | .19692945+01 | .11952742+00 | .43390390+01 | .62526500+00 |
| .14355332+00 | .19693127+01 | .11914269+00 | .43629138+01 | .63064875+00 |
| .14398965+00 | .19693315+01 | .11875878+00 | .43871877+01 | .63611188+00 |
| .14442598+00 | .19693509+01 | .11837563+00 | .44118717+01 | .64165652+00 |
| .14486232+00 | .19693708+01 | .11799319+00 | .44369778+01 | .64728499+00 |
| .14529865+00 | .19693913+01 | .11761137+00 | .44625182+01 | .65299963+00 |
| .14573498+00 | .19694124+01 | .11723013+00 | .44885054+01 | .65880269+00 |
| .14617131+00 | .19694341+01 | .11684939+00 | .45149532+01 | .66469737+00 |
| .14660764+00 | .19694564+01 | .11646910+00 | .45418747+01 | .67068563+00 |
| .14704398+00 | .19694793+01 | .11608917+00 | .45692853+01 | .67677062+00 |
| .14748031+00 | .19695027+01 | .11570955+00 | .45971996+01 | .68295511+00 |
| .14791664+00 | .19695268+01 | .11533016+00 | .46256336+01 | .68924224+00 |

TABLE 67. (Concluded)

| $M_{\infty} = .19999954+02$ |                     |                      | $\Theta_s = .13089969+00$ |                 |
|-----------------------------|---------------------|----------------------|---------------------------|-----------------|
| $\underline{\Theta}$        | $\underline{M_1^*}$ | $\underline{\psi_1}$ | $\underline{x}$           | $\underline{r}$ |
| .14835297+00                | .19695515+01        | .11495094+00         | .46546038+01              | .69563513+00    |
| .14878931+00                | .19695767+01        | .11457181+00         | .46841276+01              | .70213709+00    |
| .14922564+00                | .19696026+01        | .11419271+00         | .47142236+01              | .70875172+00    |
| .14966197+00                | .19696291+01        | .11381355+00         | .47449104+01              | .71548258+00    |
| .15009829+00                | .19696563+01        | .11343427+00         | .47762677+01              | .72233339+00    |
| .15053462+00                | .19696843+01        | .11305478+00         | .48081377+01              | .72930837+00    |
| .15097094+00                | .19697128+01        | .11267501+00         | .48407221+01              | .73641171+00    |
| .15140727+00                | .19697420+01        | .11229483+00         | .48739846+01              | .74364788+00    |
| .15184359+00                | .19697718+01        | .11191430+00         | .49079498+01              | .75102158+00    |
| .15227992+00                | .19698023+01        | .11153317+00         | .49426432+01              | .75853766+00    |
| .15271624+00                | .19698334+01        | .11115143+00         | .49780927+01              | .76620138+00    |
| .15315257+00                | .19698653+01        | .11076897+00         | .50143272+01              | .77401827+00    |
| .15358889+00                | .19698978+01        | .11038570+00         | .50513767+01              | .78199398+00    |
| .15402522+00                | .19699310+01        | .11000152+00         | .50892744+01              | .79013481+00    |
| .15446154+00                | .19699649+01        | .10961633+00         | .51280538+01              | .79844708+00    |
| .15489786+00                | .19699996+01        | .10923002+00         | .51677521+01              | .80693781+00    |
| .15533419+00                | .19700350+01        | .10884248+00         | .52084075+01              | .81561422+00    |
| .15577051+00                | .19700711+01        | .10845359+00         | .52500606+01              | .82448398+00    |
| .15620684+00                | .19701081+01        | .10806324+00         | .52927565+01              | .83355555+00    |
| .15664316+00                | .19701457+01        | .10767129+00         | .53365405+01              | .84283746+00    |
| .15707949+00                | .19701843+01        | .10727761+00         | .53814635+01              | .85233928+00    |
| .15751581+00                | .19702236+01        | .10688206+00         | .54275784+01              | .86207092+00    |
| .15795214+00                | .19702638+01        | .10648449+00         | .54749422+01              | .87204306+00    |
| .15816997+00                | .19702843+01        | .10628520+00         | .54990746+01              | .87711515+00    |

$$.94115999+00 = \Delta S/R$$

$$.13466124+02 = P_s/P_{\infty}$$

$$.32661106+01 = \rho_s/\rho_{\infty}$$

$$.41229848+01 = T_s/T_{\infty}$$



TABLE 68. CONICAL FLOWFIELD  $\theta_s = 7.5$  DEG;  $M_\infty = 22.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .98547224+00 | .22499977+02 | .13089969+00 | .15661124+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .13089969+00 | .19709075+01 | .13089969+00 | .37978773+01 | .50000000+00 |
| .13133602+00 | .19709079+01 | .13046479+00 | .38143391+01 | .50386051+00 |
| .13177235+00 | .19709090+01 | .13003268+00 | .38310212+01 | .50776501+00 |
| .13220869+00 | .19709108+01 | .12960329+00 | .38479282+01 | .51171444+00 |
| .13264502+00 | .19709134+01 | .12917651+00 | .38650651+01 | .51570976+00 |
| .13308135+00 | .19709167+01 | .12875225+00 | .38824368+01 | .51975194+00 |
| .13351768+00 | .19709206+01 | .12833045+00 | .39000483+01 | .52384193+00 |
| .13395401+00 | .19709253+01 | .12791100+00 | .39179052+01 | .52798087+00 |
| .13439035+00 | .19709306+01 | .12749383+00 | .39360127+01 | .53216976+00 |
| .13482668+00 | .19709366+01 | .12707886+00 | .39543768+01 | .53640975+00 |
| .13526301+00 | .19709433+01 | .12666601+00 | .39730031+01 | .54070196+00 |
| .13569934+00 | .19709506+01 | .12625520+00 | .39918981+01 | .54504760+00 |
| .13613568+00 | .19709585+01 | .12584636+00 | .40110675+01 | .54944786+00 |
| .13657201+00 | .19709671+01 | .12543941+00 | .40305183+01 | .55390404+00 |
| .13700834+00 | .19709764+01 | .12503428+00 | .40502570+01 | .55841742+00 |
| .13744467+00 | .19709862+01 | .12463089+00 | .40702906+01 | .56298936+00 |
| .13788100+00 | .19709967+01 | .12422918+00 | .40906264+01 | .56762127+00 |
| .13831734+00 | .19710078+01 | .12382907+00 | .41112719+01 | .57231460+00 |
| .13875367+00 | .19710195+01 | .12343050+00 | .41322349+01 | .57707086+00 |
| .13919000+00 | .19710318+01 | .12303339+00 | .41535233+01 | .58189159+00 |
| .13962633+00 | .19710448+01 | .12263767+00 | .41751457+01 | .58677841+00 |
| .14006266+00 | .19710583+01 | .12224328+00 | .41971106+01 | .59173299+00 |
| .14049900+00 | .19710725+01 | .12185015+00 | .42194273+01 | .59675712+00 |
| .14093533+00 | .19710872+01 | .12145820+00 | .42421046+01 | .60185249+00 |
| .14137166+00 | .19711025+01 | .12106738+00 | .42651532+01 | .60702113+00 |
| .14180799+00 | .19711185+01 | .12067762+00 | .42885824+01 | .61226488+00 |
| .14224432+00 | .19711350+01 | .12028884+00 | .43124031+01 | .61758577+00 |
| .14268066+00 | .19711521+01 | .11990099+00 | .43366264+01 | .62298597+00 |
| .14311699+00 | .19711698+01 | .11951398+00 | .43612635+01 | .62846760+00 |
| .14355332+00 | .19711881+01 | .11912777+00 | .43863265+01 | .63403300+00 |
| .14398965+00 | .19712070+01 | .11874226+00 | .44118280+01 | .63968456+00 |
| .14442598+00 | .19712265+01 | .11835741+00 | .44377805+01 | .64542466+00 |
| .14486232+00 | .19712465+01 | .11797314+00 | .44641980+01 | .65125599+00 |
| .14529865+00 | .19712672+01 | .11758938+00 | .44910946+01 | .65718122+00 |
| .14573498+00 | .19712885+01 | .11720606+00 | .45184850+01 | .66320315+00 |
| .14617131+00 | .19713103+01 | .11682310+00 | .45463849+01 | .66932479+00 |
| .14660764+00 | .19713328+01 | .11644044+00 | .45748100+01 | .67554908+00 |
| .14704398+00 | .19713558+01 | .11605801+00 | .46037781+01 | .68187945+00 |
| .14748031+00 | .19713795+01 | .11567572+00 | .46333063+01 | .68831909+00 |
| .14791664+00 | .19714038+01 | .11529350+00 | .46634137+01 | .69487166+00 |

TABLE 68. (Concluded)

$$M_{\infty} = .22499977+02$$

$$\Theta_s = .13089969+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $T$          |
|--------------|--------------|--------------|--------------|--------------|
| .14835297+00 | .19714287+01 | .11491129+00 | .46941198+01 | .70154083+00 |
| .14878931+00 | .19714542+01 | .11452898+00 | .47254449+01 | .70833044+00 |
| .14922563+00 | .19714806+01 | .11414652+00 | .47574106+01 | .71524458+00 |
| .14966195+00 | .19715075+01 | .11376380+00 | .47900400+01 | .72228757+00 |
| .15009828+00 | .19715352+01 | .11338075+00 | .48233576+01 | .72946406+00 |
| .15053460+00 | .19715634+01 | .11299728+00 | .48573880+01 | .73677868+00 |
| .15097093+00 | .19715923+01 | .11261331+00 | .48921582+01 | .74423652+00 |
| .15140725+00 | .19716219+01 | .11222873+00 | .49276963+01 | .75184287+00 |
| .15184358+00 | .19716522+01 | .11184345+00 | .49640325+01 | .75960336+00 |
| .15227990+00 | .19716832+01 | .11145737+00 | .50011981+01 | .76752388+00 |
| .15271623+00 | .19717149+01 | .11107039+00 | .50392264+01 | .77561069+00 |
| .15315255+00 | .19717472+01 | .11068240+00 | .50781530+01 | .78387042+00 |
| .15358888+00 | .19717803+01 | .11029329+00 | .51180156+01 | .79231014+00 |
| .15402520+00 | .19718142+01 | .10990295+00 | .51588541+01 | .80093730+00 |
| .15446153+00 | .19718488+01 | .10951125+00 | .52007112+01 | .80975989+00 |
| .15489785+00 | .19718842+01 | .10911866+00 | .52436317+01 | .81878623+00 |
| .15533417+00 | .19719204+01 | .10872326+00 | .52876647+01 | .82802548+00 |
| .15577050+00 | .19719574+01 | .10832671+00 | .53328618+01 | .83748722+00 |
| .15620682+00 | .19719952+01 | .10792824+00 | .53792787+01 | .84718193+00 |
| .15664314+00 | .19720340+01 | .10755708+00 | .54234421+01 | .85638499+00 |

$$.11556980+01 = \Delta S/R$$

$$.16701941+02 = P_s/P_{\infty}$$

$$.34109397+01 = \rho_s/\rho_{\infty}$$

$$.48965807+01 = T_s/T_{\infty}$$

TABLE 69. CONICAL FLOWFIELD  $\theta_s = 7.5 \text{ DEG}$ ;  $M_\infty = 25.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .98614634+00 | .24999928+02 | .13089969+00 | .15548418+00 |              |
| $e$          | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .13089969+00 | .19722557+01 | .43089969+00 | .37978773+01 | .50000000+00 |
| .13133602+00 | .19722561+01 | .13046479+00 | .38147558+01 | .50391554+00 |
| .13177235+00 | .19722572+01 | .13003268+00 | .38318657+01 | .50787694+00 |
| .13220869+00 | .19722590+01 | .12960327+00 | .38492121+01 | .51188517+00 |
| .13264502+00 | .19722616+01 | .12917647+00 | .38668003+01 | .51594128+00 |
| .13308135+00 | .19722649+01 | .12875219+00 | .38846357+01 | .52004632+00 |
| .13351768+00 | .19722688+01 | .12833033+00 | .39027238+01 | .52420130+00 |
| .13395401+00 | .19722735+01 | .12791382+00 | .39210706+01 | .52840745+00 |
| .13439035+00 | .19722788+01 | .12749356+00 | .39396817+01 | .53266583+00 |
| .13482668+00 | .19722848+01 | .12707848+00 | .39585636+01 | .53697769+00 |
| .13526301+00 | .19722915+01 | .12666549+00 | .39777225+01 | .54134423+00 |
| .13569934+00 | .19722988+01 | .12625451+00 | .39971652+01 | .54576677+00 |
| .13613568+00 | .19723068+01 | .12584547+00 | .40168982+01 | .55024656+00 |
| .13657201+00 | .19723154+01 | .12543829+00 | .40369291+01 | .55478507+00 |
| .13700834+00 | .19723246+01 | .12503288+00 | .40572650+01 | .55938363+00 |
| .13744467+00 | .19723345+01 | .12462918+00 | .40779135+01 | .56404374+00 |
| .13788100+00 | .19723450+01 | .12422711+00 | .40988825+01 | .56876691+00 |
| .13831734+00 | .19723561+01 | .12382660+00 | .41201802+01 | .57355469+00 |
| .13875367+00 | .19723679+01 | .12342757+00 | .41418153+01 | .57840878+00 |
| .13919000+00 | .19723802+01 | .12302995+00 | .41637966+01 | .58333083+00 |
| .13962633+00 | .19723932+01 | .12263367+00 | .41861332+01 | .58832260+00 |
| .14006266+00 | .19724068+01 | .12223866+00 | .42088347+01 | .59338593+00 |
| .14049900+00 | .19724209+01 | .12184484+00 | .42319112+01 | .59852274+00 |
| .14093533+00 | .19724357+01 | .12145216+00 | .42553728+01 | .60373492+00 |
| .14137166+00 | .19724511+01 | .12106053+00 | .42792306+01 | .60902464+00 |
| .14180799+00 | .19724670+01 | .12066988+00 | .43034956+01 | .61439398+00 |
| .14224432+00 | .19724836+01 | .12028014+00 | .43281796+01 | .61984815+00 |
| .14268066+00 | .19725008+01 | .11989125+00 | .43532948+01 | .62538050+00 |
| .14311699+00 | .19725186+01 | .11950313+00 | .43788537+01 | .63100240+00 |
| .14355332+00 | .19725370+01 | .11911571+00 | .44048700+01 | .63671343+00 |
| .14398965+00 | .19725559+01 | .11872892+00 | .44313575+01 | .64251620+00 |
| .14442598+00 | .19725755+01 | .11834268+00 | .44583303+01 | .64841340+00 |
| .14486232+00 | .19725956+01 | .11795692+00 | .44858040+01 | .65440796+00 |
| .14529865+00 | .19726164+01 | .11757157+00 | .45137946+01 | .66050291+00 |
| .14573498+00 | .19726378+01 | .11718655+00 | .45423109+01 | .66670131+00 |
| .14617131+00 | .19726598+01 | .11680179+00 | .45713930+01 | .67300651+00 |
| .14660764+00 | .19726824+01 | .11641720+00 | .46010365+01 | .67942188+00 |
| .14704398+00 | .19727056+01 | .11603272+00 | .46312684+01 | .68595112+00 |
| .14748031+00 | .19727295+01 | .11564825+00 | .46621085+01 | .69269792+00 |
| .14791664+00 | .19727540+01 | .11526372+00 | .46935786+01 | .70000000+00 |

TABLE 69. (Concluded)

$$M_{\infty} = .24999928+32$$

$$\Theta_s = .13087969+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .14835297+00 | .19727793+01 | .11487904+00 | .47256998+01 | .70626045+00 |
| .14878929+00 | .19728052+01 | .11449413+00 | .47584968+01 | .71328477+00 |
| .14922561+00 | .19728318+01 | .11410889+00 | .47919938+01 | .72044385+00 |
| .14966194+00 | .19728590+01 | .11372325+00 | .48262172+01 | .72774263+00 |
| .15009826+00 | .19728869+01 | .11333710+00 | .48611946+01 | .73518629+00 |
| .15053459+00 | .19729154+01 | .11295034+00 | .48969548+01 | .74278019+00 |
| .15097091+00 | .19729447+01 | .11256208+00 | .49335290+01 | .75053012+00 |
| .15140724+00 | .19729746+01 | .11217462+00 | .49709496+01 | .75844216+00 |
| .15184356+00 | .19730053+01 | .11178544+00 | .50092515+01 | .76652275+00 |
| .15227989+00 | .19730366+01 | .11139524+00 | .50484713+01 | .77477874+00 |
| .15271621+00 | .19730687+01 | .11100390+00 | .50886477+01 | .78321727+00 |
| .15315254+00 | .19731015+01 | .11061129+00 | .51298227+01 | .79184615+00 |
| .15358886+00 | .19731351+01 | .11021730+00 | .51720465+01 | .80067355+00 |
| .15402519+00 | .19731695+01 | .10982179+00 | .52153487+01 | .80970829+00 |
| .15446151+00 | .19732047+01 | .10942462+00 | .52597972+01 | .81895959+00 |
| .15489784+00 | .19732407+01 | .10902564+00 | .53054396+01 | .82843737+00 |
| .15533416+00 | .19732775+01 | .10862471+00 | .53523350+01 | .83815240+00 |
| .15548418+00 | .19732904+01 | .10848637+00 | .53687589+01 | .84154956+00 |

$$.13658053+01 = \Delta S/R$$

$$.20317284+02 = P_s/P_{\infty}$$

$$.35272045+01 = \rho_s/\rho_{\infty}$$

$$.57801403+01 = T_s/T_{\infty}$$

TABLE 70. CONICAL FLOWFIELD  $\theta_s = 7.5 \text{ DEG}$ ;  $M_\infty = 27.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .98664714+00 | .27499960+02 | .13069969+00 | .15464345+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .13089969+00 | .19732573+01 | .13089969+00 | .37978773+01 | .50000000+00 |
| .13133602+00 | .19732577+01 | .13046479+00 | .38150854+01 | .50395908+00 |
| .13177235+00 | .19732588+01 | .13003268+00 | .38325339+01 | .50796551+00 |
| .13220869+00 | .19732606+01 | .12960326+00 | .38502285+01 | .51202034+00 |
| .13264502+00 | .19732632+01 | .12917644+00 | .38681744+01 | .51612464+00 |
| .13308135+00 | .19732665+01 | .12875213+00 | .38863777+01 | .52027951+00 |
| .13351768+00 | .19732704+01 | .12833024+00 | .39048439+01 | .52448607+00 |
| .13395401+00 | .19732751+01 | .12791067+00 | .39235796+01 | .52874557+00 |
| .13439035+00 | .19732804+01 | .12749334+00 | .39425909+01 | .53305916+00 |
| .13482668+00 | .19732864+01 | .12707817+00 | .39618846+01 | .53742818+00 |
| .13526301+00 | .19732931+01 | .12666507+00 | .39814672+01 | .54185386+00 |
| .13569934+00 | .19733004+01 | .12625396+00 | .40013461+01 | .54633762+00 |
| .13613568+00 | .19733084+01 | .12584475+00 | .40215282+01 | .55088079+00 |
| .13657201+00 | .19733170+01 | .12543738+00 | .40420216+01 | .55548491+00 |
| .13700834+00 | .19733263+01 | .12503175+00 | .40628339+01 | .56015143+00 |
| .13744467+00 | .19733362+01 | .12462779+00 | .40839733+01 | .56488191+00 |
| .13788100+00 | .19733467+01 | .12422543+00 | .41054482+01 | .56967797+00 |
| .13831734+00 | .19733578+01 | .12382459+00 | .41272675+01 | .57454130+00 |
| .13875367+00 | .19733696+01 | .12342519+00 | .41494405+01 | .57947365+00 |
| .13919000+00 | .19733819+01 | .12302716+00 | .41719766+01 | .58447681+00 |
| .13962633+00 | .19733949+01 | .12263043+00 | .41948857+01 | .58955269+00 |
| .14006266+00 | .19734085+01 | .12223492+00 | .42181782+01 | .59470322+00 |
| .14049900+00 | .19734227+01 | .12184055+00 | .42418648+01 | .59993047+00 |
| .14093533+00 | .19734375+01 | .12144726+00 | .42659566+01 | .60523651+00 |
| .14137166+00 | .19734529+01 | .12105496+00 | .42904654+01 | .61062360+00 |
| .14180799+00 | .19734690+01 | .12066360+00 | .43154033+01 | .61609399+00 |
| .14224432+00 | .19734856+01 | .12027308+00 | .43407828+01 | .62165008+00 |
| .14268066+00 | .19735028+01 | .11988335+00 | .43666175+01 | .62729440+00 |
| .14311699+00 | .19735207+01 | .11949432+00 | .43929210+01 | .63302952+00 |
| .14355332+00 | .19735391+01 | .11910591+00 | .44197078+01 | .63885820+00 |
| .14398965+00 | .19735581+01 | .11871807+00 | .44469932+01 | .64478327+00 |
| .14442598+00 | .19735778+01 | .11833069+00 | .44747927+01 | .65080767+00 |
| .14486232+00 | .19735980+01 | .11794372+00 | .45031231+01 | .65693454+00 |
| .14529865+00 | .19736189+01 | .11755708+00 | .45320018+01 | .66316716+00 |
| .14573498+00 | .19736404+01 | .11717067+00 | .45614468+01 | .66950890+00 |
| .14617131+00 | .19736625+01 | .11678443+00 | .45914777+01 | .67596341+00 |
| .14660764+00 | .19736852+01 | .11639826+00 | .46221139+01 | .68253431+00 |
| .14704398+00 | .19737086+01 | .11601209+00 | .46533772+01 | .68922573+00 |
| .14748031+00 | .19737326+01 | .11562584+00 | .46852892+01 | .69604161+00 |
| .14791663+00 | .19737574+01 | .11523940+00 | .47178733+01 | .70298637+00 |

TABLE 70. (Concluded)

$$M_{\infty} = .27499960+02$$

$$\Theta_s = .13089969+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .14835296+00 | .19737828+01 | .11485270+00 | .47511545+01 | .71006465+00 |
| .14878928+00 | .19738089+01 | .11446564+00 | .47851592+01 | .71728134+00 |
| .14922561+00 | .19738357+01 | .11407813+00 | .48199144+01 | .72464149+00 |
| .14966193+00 | .19738631+01 | .11369006+00 | .48554494+01 | .73215052+00 |
| .15009826+00 | .19738912+01 | .11330135+00 | .48917951+01 | .73981414+00 |
| .15053458+00 | .19739200+01 | .11291187+00 | .49289838+01 | .74763837+00 |
| .15097091+00 | .19739496+01 | .11252153+00 | .49670503+01 | .75562964+00 |
| .15140723+00 | .19739798+01 | .11213021+00 | .50060307+01 | .76379460+00 |
| .15184356+00 | .19740107+01 | .11173779+00 | .50459645+01 | .77214058+00 |
| .15227988+00 | .19740424+01 | .11134416+00 | .50868931+01 | .78067522+00 |
| .15271620+00 | .19740749+01 | .11094918+00 | .51288601+01 | .78940650+00 |
| .15315253+00 | .19741081+01 | .11055272+00 | .51719136+01 | .79834331+00 |
| .15358885+00 | .19741421+01 | .11015465+00 | .52161034+01 | .80749480+00 |
| .15402518+00 | .19741769+01 | .10975480+00 | .52614838+01 | .81687096+00 |
| .15446150+00 | .19742126+01 | .10935304+00 | .53081121+01 | .82648227+00 |
| .15464345+00 | .19742277+01 | .10918490+00 | .53279399+01 | .83056244+00 |

$$.15693365+01 = \Delta S/R$$

$$.24312541+02 = P_s/P_{\infty}$$

$$.36211935+01 = \rho_s/\rho_{\infty}$$

$$.67139581+01 = T_s/T_{\infty}$$



TABLE 71. CONICAL FLOWFIELD  $\theta_s = 7.5 \text{ DEG}$ ;  $M_\infty = 30.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .98702928+00 | .29999917+02 | .43089969+00 | .15400006+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .13089969+00 | .19740215+01 | .13089969+00 | .37978773+01 | .50000000+00 |
| .13133602+00 | .19740219+01 | .13046479+00 | .38153496+01 | .50399399+00 |
| .13177235+00 | .19740230+01 | .13003267+00 | .38330697+01 | .50803652+00 |
| .13220869+00 | .19740249+01 | .12960325+00 | .38510435+01 | .51212872+00 |
| .13264502+00 | .19740275+01 | .12917642+00 | .38692767+01 | .51627171+00 |
| .13308135+00 | .19740307+01 | .12875209+00 | .38877753+01 | .52046661+00 |
| .13351768+00 | .19740347+01 | .12833016+00 | .39065455+01 | .52471462+00 |
| .13395401+00 | .19740393+01 | .12791055+00 | .39255939+01 | .52901702+00 |
| .13439035+00 | .19740447+01 | .12749317+00 | .39449270+01 | .53337501+00 |
| .13482668+00 | .19740507+01 | .12707792+00 | .39645520+01 | .53779001+00 |
| .13526301+00 | .19740574+01 | .12666473+00 | .39844757+01 | .54226330+00 |
| .13569934+00 | .19740647+01 | .12625350+00 | .40047059+01 | .54679637+00 |
| .13613568+00 | .19740727+01 | .12584416+00 | .40252501+01 | .55139063+00 |
| .13657201+00 | .19740813+01 | .12543663+00 | .40461165+01 | .55604766+00 |
| .13700834+00 | .19740905+01 | .12503082+00 | .40673133+01 | .56076901+00 |
| .13744467+00 | .19741005+01 | .12462666+00 | .40888490+01 | .56555630+00 |
| .13788100+00 | .19741110+01 | .12422406+00 | .41107328+01 | .57041126+00 |
| .13831734+00 | .19741221+01 | .12382295+00 | .41329739+01 | .57533566+00 |
| .13875367+00 | .19741339+01 | .12342325+00 | .41555821+01 | .58033133+00 |
| .13919000+00 | .19741463+01 | .12302489+00 | .41785673+01 | .58540016+00 |
| .13962633+00 | .19741593+01 | .12262778+00 | .42019402+01 | .59054413+00 |
| .14006266+00 | .19741729+01 | .12223186+00 | .42257117+01 | .59576534+00 |
| .14049900+00 | .19741872+01 | .12183704+00 | .42498932+01 | .60106594+00 |
| .14093533+00 | .19742020+01 | .12144325+00 | .42744966+01 | .60644012+00 |
| .14137166+00 | .19742174+01 | .12105042+00 | .42995344+01 | .61191430+00 |
| .14180799+00 | .19742335+01 | .12065846+00 | .43250193+01 | .61746683+00 |
| .14224432+00 | .19742502+01 | .12026731+00 | .43509649+01 | .62310827+00 |
| .14268066+00 | .19742674+01 | .11987688+00 | .43773054+01 | .62884129+00 |
| .14311699+00 | .19742853+01 | .11948710+00 | .44042955+01 | .63466861+00 |
| .14355332+00 | .19743038+01 | .11909790+00 | .44317109+01 | .64059322+00 |
| .14398965+00 | .19743229+01 | .11870918+00 | .44596475+01 | .64661805+00 |
| .14442598+00 | .19743426+01 | .11832088+00 | .44881222+01 | .65274628+00 |
| .14486232+00 | .19743629+01 | .11793292+00 | .45171529+01 | .65898127+00 |
| .14529865+00 | .19743839+01 | .11754520+00 | .45467585+01 | .66532651+00 |
| .14573498+00 | .19744054+01 | .11715765+00 | .45769582+01 | .67178559+00 |
| .14617131+00 | .19744275+01 | .11677019+00 | .46077729+01 | .67836241+00 |
| .14660764+00 | .19744504+01 | .11638272+00 | .46392239+01 | .68506090+00 |
| .14704398+00 | .19744739+01 | .11599517+00 | .46713245+01 | .69188543+00 |
| .14748030+00 | .19744982+01 | .11560743+00 | .47041277+01 | .69884021+00 |
| .14791663+00 | .19745231+01 | .11521943+00 | .47376300+01 | .70593018+00 |
| .14835295+00 | .19745487+01 | .11483105+00 | .47718678+01 | .71316023+00 |
| .14878928+00 | .19745749+01 | .11444222+00 | .48068673+01 | .72053558+00 |
| .14922560+00 | .19746018+01 | .11405281+00 | .48426646+01 | .72806178+00 |
| .14966192+00 | .19746295+01 | .11366274+00 | .48792852+01 | .73574466+00 |
| .15009825+00 | .19746578+01 | .11327189+00 | .49167648+01 | .74359041+00 |
| .15053457+00 | .19746868+01 | .11288016+00 | .49551386+01 | .75160554+00 |
| .15097090+00 | .19747165+01 | .11248742+00 | .49944447+01 | .75979707+00 |
| .15140722+00 | .19747470+01 | .11209355+00 | .50347233+01 | .76817235+00 |
| .15184355+00 | .19747781+01 | .11169844+00 | .50760176+01 | .77673931+00 |
| .15227987+00 | .19748101+01 | .11130194+00 | .51183726+01 | .78550627+00 |
| .15271620+00 | .19748428+01 | .11090392+00 | .51618373+01 | .79448214+00 |
| .15315252+00 | .19748764+01 | .11050424+00 | .52064643+01 | .80367657+00 |
| .15358885+00 | .19749108+01 | .11010274+00 | .52523090+01 | .81309967+00 |
| .15402518+00 | .19749439+01 | .10972253+00 | .52994640+01 | .82219967+00 |

.17452211+01 =  $\Delta S/R$

.28487463+02 =  $p_0/p_\infty$

.36977563+01 =  $\rho_0/\rho_\infty$

.77580732+01 =  $T_0/T_\infty$

TABLE 72. CONICAL FLOWFIELD  $\theta_s = 10.0$  DEG;  $M_\infty = 1.1289566$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .50000938+00 | .11289566+01 | .17453292+00 | .11187998+01 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .17453292+00 | .10000000+01 | .17453292+00 | .28356408+01 | .50000000+00 |
| .20245817+00 | .10006119+01 | .15041530+00 | .28243313+01 | .57975189+00 |
| .23038343+00 | .10019863+01 | .13205605+00 | .28175274+01 | .66084496+00 |
| .25830868+00 | .10037226+01 | .11758638+00 | .28143827+01 | .74359182+00 |
| .28623393+00 | .10056263+01 | .10584916+00 | .28143583+01 | .82831047+00 |
| .31415918+00 | .10075978+01 | .96129522+01 | .28171062+01 | .91533303+00 |
| .34208444+00 | .10095850+01 | .87928385+01 | .28224047+01 | .10050128+01 |
| .36739170+00 | .10113764+01 | .81517603+01 | .28292982+01 | .10888992+01 |
| .39269896+00 | .10131477+01 | .75883374+01 | .28381299+01 | .11755915+01 |
| .41800622+00 | .10148942+01 | .70884213+01 | .28488923+01 | .12654303+01 |
| .44331348+00 | .10166142+01 | .66410825+01 | .28616127+01 | .13587931+01 |
| .46862074+00 | .10183081+01 | .62377281+01 | .28763512+01 | .14561009+01 |
| .49392800+00 | .10199775+01 | .58715284+01 | .28932016+01 | .15578279+01 |
| .51661713+00 | .10214554+01 | .55702344+01 | .29102083+01 | .16532271+01 |
| .53930620+00 | .10229177+01 | .52910775+01 | .29291317+01 | .17530470+01 |
| .56199528+00 | .10243668+01 | .50313070+01 | .29501168+01 | .18577846+01 |
| .58468435+00 | .10258052+01 | .47885962+01 | .29733378+01 | .19680053+01 |
| .60737342+00 | .10272355+01 | .45609340+01 | .29990046+01 | .20843573+01 |
| .63006250+00 | .10286606+01 | .43466002+01 | .30273677+01 | .22075882+01 |
| .65013360+00 | .10299192+01 | .41669078+01 | .30549447+01 | .23230265+01 |
| .67020471+00 | .10311781+01 | .39955631+01 | .30851113+01 | .24452204+01 |
| .69027581+00 | .10324394+01 | .38317487+01 | .31101580+01 | .25749745+01 |
| .71034691+00 | .10337056+01 | .36747299+01 | .31544253+01 | .27132223+01 |
| .73041802+00 | .10349790+01 | .35238497+01 | .31943191+01 | .28610577+01 |
| .75048912+00 | .10362623+01 | .33784926+01 | .32383243+01 | .30197714+01 |
| .76794226+00 | .10373885+01 | .32561518+01 | .32803818+01 | .31678113+01 |
| .78539539+00 | .10385263+01 | .31372175+01 | .33264447+01 | .33264263+01 |
| .80284853+00 | .10396782+01 | .30213706+01 | .33770593+01 | .34970267+01 |
| .82030166+00 | .10408463+01 | .29082924+01 | .34328796+01 | .36812899+01 |
| .83775479+00 | .10420336+01 | .27976818+01 | .34946970+01 | .38812288+01 |
| .85520793+00 | .10432431+01 | .26892394+01 | .35634791+01 | .40992855+01 |
| .87004309+00 | .10442912+01 | .25985464+01 | .36283049+01 | .43010960+01 |
| .88487826+00 | .10453602+01 | .25090136+01 | .36999217+01 | .45203871+01 |
| .89971342+00 | .10464529+01 | .24204515+01 | .37794282+01 | .47598755+01 |
| .91454658+00 | .10475726+01 | .23326583+01 | .38681822+01 | .50228959+01 |
| .92938375+00 | .10487228+01 | .22454150+01 | .39678812+01 | .53135921+01 |
| .94421891+00 | .10499086+01 | .21584831+01 | .40806787+01 | .56371865+01 |
| .95643611+00 | .10509138+01 | .20869426+01 | .41853444+01 | .59330494+01 |
| .96865330+00 | .10519502+01 | .20152621+01 | .43027430+01 | .62604703+01 |
| .98087049+00 | .10530214+01 | .19432493+01 | .44353914+01 | .66254434+01 |



TABLE 72. (Concluded)

$$M_{\infty} = .11289566+01$$

$$\Theta_s = .17453292+00$$

| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .99308767+00 | .10541322+01 | .18706806-01 | .45865433+01 | .70356715+01 |
| .10053048+01 | .10552885+01 | .17972767-01 | .47604854+01 | .75012439+01 |
| .10175218+01 | .10564981+01 | .17227654-01 | .49630026+01 | .80356929+01 |
| .10271208+01 | .10574919+01 | .16630352-01 | .51472906+01 | .85158452+01 |
| .10367199+01 | .10585303+01 | .16021430-01 | .53594241+01 | .90621735+01 |
| .10463189+01 | .10596208+01 | .15397102-01 | .56066299+01 | .96912937+01 |
| .10559180+01 | .10607731+01 | .14753208-01 | .58990349+01 | .10426358+02 |
| .10655171+01 | .10620003+01 | .14084220-01 | .62513562+01 | .11300820+02 |
| .10751161+01 | .10633204+01 | .13382390-01 | .66860089+01 | .12365317+02 |
| .10820973+01 | .10643536+01 | .12845039-01 | .70736960+01 | .13303466+02 |
| .10890778+01 | .10654644+01 | .12278229-01 | .75455465+01 | .14433029+02 |
| .10960575+01 | .10666742+01 | .11672497-01 | .81364214+01 | .15831402+02 |
| .11030372+01 | .10680171+01 | .11012629-01 | .89063001+01 | .17630999+02 |
| .11100169+01 | .10695520+01 | .10273516-01 | .99705973+01 | .20085006+02 |
| .11169966+01 | .10713999+01 | .94023496-02 | .11597194+02 | .23776837+02 |
| .11187998+01 | .10719587+01 | .91423541-02 | .12183737+02 | .25094211+02 |

$$.45523047-05 = \Delta S/R$$

$$.11805180+01 = P_s/P_{\infty}$$

$$.11046938+01 = \rho_s/\rho_{\infty}$$

$$.10686382+01 = T_s/T_{\infty}$$

TABLE 73. CONICAL FLOWFIELD  $\theta_s = 10.0$  DEG;  $M_\infty = 1.5$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $e_w$        |              |
|--------------|--------------|--------------|--------------|--------------|
| .61529264+00 | .14999996+01 | .17453292+00 | .74744381+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .17453292+00 | .12365622+01 | .17453292+00 | .28356408+01 | .50000000+00 |
| .19198620+00 | .12368832+01 | .15864412+00 | .28733157+01 | .55851594+00 |
| .20943949+00 | .12316779+01 | .14534593+00 | .29138188+01 | .61935122+00 |
| .22689277+00 | .12327722+01 | .13402461+00 | .29572824+01 | .68274232+00 |
| .24434605+00 | .12340591+01 | .12424741+00 | .30038775+01 | .74895062+00 |
| .26179934+00 | .12354706+01 | .11569979+00 | .30538162+01 | .81826740+00 |
| .27925262+00 | .12369627+01 | .10814731+00 | .31073534+01 | .89101903+00 |
| .29496057+00 | .12383503+01 | .10205245+00 | .31588625+01 | .95973554+00 |
| .31066853+00 | .12397655+01 | .96516434+01 | .32137883+01 | .10318342+01 |
| .32637648+00 | .12411985+01 | .91456842+01 | .32724286+01 | .11076556+01 |
| .34208444+00 | .12426428+01 | .86806476+01 | .33351267+01 | .11875848+01 |
| .35779239+00 | .12440946+01 | .82509715+01 | .34022803+01 | .12720601+01 |
| .37350035+00 | .12455494+01 | .78520313+01 | .34743500+01 | .13615824+01 |
| .38746297+00 | .12468456+01 | .75200520+01 | .35429695+01 | .14458586+01 |
| .40142560+00 | .12481437+01 | .72069142+01 | .36163292+01 | .15350401+01 |
| .41538823+00 | .12494437+01 | .69105767+01 | .36949294+01 | .16296574+01 |
| .42935085+00 | .12507462+01 | .66292435+01 | .37793494+01 | .17303206+01 |
| .44331348+00 | .12520520+01 | .63613225+01 | .38702620+01 | .18377348+01 |
| .45727611+00 | .12533622+01 | .61054029+01 | .39684640+01 | .19527206+01 |
| .46949340+00 | .12545135+01 | .58903173+01 | .40610676+01 | .20602963+01 |
| .48171070+00 | .12556704+01 | .56826752+01 | .41606871+01 | .21751537+01 |
| .49392800+00 | .12568342+01 | .54817595+01 | .42681587+01 | .22981656+01 |
| .50614525+00 | .12580065+01 | .52868932+01 | .43844773+01 | .24300541+01 |
| .51836244+00 | .12591888+01 | .50974570+01 | .45108187+01 | .25729234+01 |
| .53057963+00 | .12603832+01 | .49128644+01 | .46485832+01 | .27273046+01 |
| .54105151+00 | .12614181+01 | .47580548+01 | .47770267+01 | .28703236+01 |
| .55152339+00 | .12624650+01 | .46060309+01 | .49163601+01 | .30245605+01 |
| .56199528+00 | .12635255+01 | .44564478+01 | .50680883+01 | .31915402+01 |
| .57246716+00 | .12646016+01 | .43089546+01 | .52340160+01 | .33730869+01 |
| .58293904+00 | .12656954+01 | .41631915+01 | .54163266+01 | .35714021+01 |
| .59341092+00 | .12668097+01 | .40188029+01 | .56176940+01 | .37891740+01 |
| .60213748+00 | .12677559+01 | .38992457+01 | .58024185+01 | .39878822+01 |
| .61086405+00 | .12687202+01 | .37801333+01 | .60050055+01 | .42047395+01 |
| .61959062+00 | .12697050+01 | .36612131+01 | .62283164+01 | .44426029+01 |
| .62831718+00 | .12707127+01 | .35421997+01 | .64758821+01 | .47049903+01 |
| .63704375+00 | .12717467+01 | .34227826+01 | .67521170+01 | .49962887+01 |
| .64577032+00 | .12728104+01 | .33026062+01 | .70626171+01 | .53220470+01 |
| .65275157+00 | .12738858+01 | .32056428+01 | .73404692+01 | .56121941+01 |
| .65973283+00 | .12749840+01 | .31076908+01 | .76495301+01 | .59335636+01 |
| .66671408+00 | .12759135+01 | .30084528+01 | .79957364+01 | .62920020+01 |

TABLE 73. (Concluded)

$$M_{\infty} = .14999996+01$$

$$\Theta_s = .17453292+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .67369533+00 | .12764729+01 | .29075995-01 | .83867054+01 | .66949947+01 |
| .68067659+00 | .12774688+01 | .28047264-01 | .88323984+01 | .71523085+01 |
| .68765784+00 | .12785071+01 | .26993312-01 | .93461331+01 | .76769707+01 |
| .69289378+00 | .12793181+01 | .26182540-01 | .97868311+01 | .81251518+01 |
| .69812972+00 | .12801611+01 | .25350727-01 | .10286286+02 | .86311841+01 |
| .70336469+00 | .12810414+01 | .24493799-01 | .10858100+02 | .92082825+01 |
| .70859947+00 | .12819648+01 | .23606412-01 | .11520968+02 | .98745798+01 |
| .71383425+00 | .12829398+01 | .22681810-01 | .12301005+02 | .10655348+02 |
| .71906903+00 | .12839775+01 | .21710835-01 | .13236165+02 | .11587232+02 |
| .72255888+00 | .12847116+01 | .21031640-01 | .13973151+02 | .12318805+02 |
| .72604873+00 | .12854865+01 | .20321093-01 | .14829086+02 | .13165660+02 |
| .72953858+00 | .12863107+01 | .19572243-01 | .15839516+02 | .14161904+02 |
| .73302843+00 | .12871957+01 | .18775553-01 | .17057272+02 | .15358132+02 |
| .73651829+00 | .12881585+01 | .17917022-01 | .18565392+02 | .16833709+02 |
| .74000814+00 | .12892253+01 | .16974822-01 | .20504743+02 | .18722972+02 |
| .74349799+00 | .12904416+01 | .15911296-01 | .23142319+02 | .21279929+02 |
| .74698784+00 | .12918994+01 | .14649801-01 | .27083364+02 | .25078813+02 |
| .74744381+00 | .12921171+01 | .14462508-01 | .27761915+02 | .25730663+02 |

$$.90571120+05 = \Delta S/R$$

$$.12332915+01 = P_s/P_{\infty}$$

$$.11340619+01 = \rho_s/\rho_{\infty}$$

$$.10874992+01 = T_s/T_{\infty}$$

TABLE 74. CONICAL FLOWFIELD  $\theta_s = 10.0$  DEG;  $M_\infty = 2.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .71883472+00 | .19999904+01 | .47453292+00 | .54806478+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $\chi$       | $\tau$       |
| .17453292+00 | .14376425+01 | .17453292+00 | .28356408+01 | .50000000+00 |
| .18544122+00 | .14377976+01 | .16425608+00 | .28773624+01 | .53978326+00 |
| .19634952+00 | .14382081+01 | .15509018+00 | .29216162+01 | .58114553+00 |
| .20725783+00 | .14388105+01 | .14684676+00 | .29685594+01 | .62422084+00 |
| .21816613+00 | .14395591+01 | .13937822+00 | .30183747+01 | .66915747+00 |
| .22907443+00 | .14402044+01 | .13256708+00 | .30712709+01 | .71611980+00 |
| .23911007+00 | .14412908+01 | .12679955+00 | .31228616+01 | .76127145+00 |
| .24914571+00 | .14422211+01 | .12144705+00 | .31774737+01 | .80845138+00 |
| .25918134+00 | .14432000+01 | .11645851+00 | .32353469+01 | .85783649+00 |
| .26921698+00 | .14442188+01 | .11179062+00 | .32967517+01 | .90962431+00 |
| .27925262+00 | .14452710+01 | .10740642+00 | .33619951+01 | .96403636+00 |
| .28841559+00 | .14462565+01 | .10362418+00 | .34252129+01 | .10162199+01 |
| .29757857+00 | .14472626+01 | .10003077+00 | .34922226+01 | .10710126+01 |
| .30674154+00 | .14482871+01 | .96607491+00 | .35633648+01 | .11286546+01 |
| .31590451+00 | .14493283+01 | .93337808+00 | .36390253+01 | .11894165+01 |
| .32506749+00 | .14503850+01 | .90206832+00 | .37196446+01 | .12536054+01 |
| .33335780+00 | .14513539+01 | .87482430+00 | .37972769+01 | .13149246+01 |
| .34164811+00 | .14523347+01 | .84851667+00 | .38796043+01 | .13796285+01 |
| .34993841+00 | .14533273+01 | .82306299+00 | .39677103+01 | .14480504+01 |
| .35822872+00 | .14543319+01 | .79838619+00 | .40615491+01 | .15205707+01 |
| .36651903+00 | .14553489+01 | .77441517+00 | .41619561+01 | .15976247+01 |
| .37393668+00 | .14562698+01 | .75351108+00 | .42579603+01 | .16708194+01 |
| .38135452+00 | .14572017+01 | .73307257+00 | .43604153+01 | .17484565+01 |
| .38877197+00 | .14581453+01 | .71305607+00 | .44700187+01 | .18310096+01 |
| .39618962+00 | .14591014+01 | .69341991+00 | .45875762+01 | .19190240+01 |
| .40360726+00 | .14600711+01 | .67412224+00 | .47140239+01 | .20131325+01 |
| .41015224+00 | .14609389+01 | .65734379+00 | .48338485+01 | .21018164+01 |
| .41669722+00 | .14618191+01 | .64076968+00 | .49623240+01 | .21964086+01 |
| .42324220+00 | .14627127+01 | .62437121+00 | .51004714+01 | .22975940+01 |
| .42978719+00 | .14636211+01 | .60812026+00 | .52494064+01 | .24061728+01 |
| .43633217+00 | .14645457+01 | .59198689+00 | .54107803+01 | .25230873+01 |
| .44287448+00 | .14653614+01 | .57807602+00 | .55617877+01 | .26320136+01 |
| .44767680+00 | .14661916+01 | .56420863+00 | .57245633+01 | .27488950+01 |
| .45334912+00 | .14670378+01 | .55036280+00 | .59006307+01 | .28747423+01 |
| .45902143+00 | .14679016+01 | .53651340+00 | .60917985+01 | .30107531+01 |
| .46469375+00 | .14687848+01 | .52263394+00 | .63002385+01 | .31583622+01 |
| .46949340+00 | .14695489+01 | .51084474+00 | .64920350+01 | .32935959+01 |
| .47429306+00 | .14703299+01 | .49899288+00 | .66999881+01 | .34396300+01 |
| .47909271+00 | .14711296+01 | .48705664+00 | .69263921+01 | .35979710+01 |
| .48389236+00 | .14719499+01 | .47501054+00 | .71740244+01 | .37704394+01 |

TABLE 74. (Concluded)

| $M_{\infty} = .19999904+01$ |              | $\Theta_s = .17453292+00$ |              |              |
|-----------------------------|--------------|---------------------------|--------------|--------------|
| $\Theta$                    | $M_1^*$      | $\psi_1$                  | $x$          | $r$          |
| .48869202+00                | .14727932+01 | .46282645-01              | .74462793+01 | .39592552+01 |
| .49261898+00                | .14735027+01 | .45273472-01              | .76902538+01 | .41277971+01 |
| .49654590+00                | .14742319+01 | .44251349-01              | .79563265+01 | .43109442+01 |
| .50047272+00                | .14749822+01 | .43213092-01              | .82479337+01 | .45109307+01 |
| .50439881+00                | .14757562+01 | .42155243-01              | .85692583+01 | .47304696+01 |
| .50832489+00                | .14765568+01 | .41075237-01              | .89256520+01 | .49730301+01 |
| .51137851+00                | .14772001+01 | .40217288-01              | .92313329+01 | .51803464+01 |
| .51443213+00                | .14778637+01 | .39341226-01              | .95662154+01 | .54067491+01 |
| .51748575+00                | .14785499+01 | .38444318-01              | .99351937+01 | .56553918+01 |
| .52053937+00                | .14792617+01 | .37523374-01              | .10344405+02 | .59302222+01 |
| .52359299+00                | .14800026+01 | .36574386-01              | .10801688+02 | .62362743+01 |
| .52577415+00                | .14805521+01 | .35876788-01              | .11163278+02 | .64775416+01 |
| .52795531+00                | .14811205+01 | .35160214-01              | .11559240+02 | .67410440+01 |
| .53013647+00                | .14817104+01 | .34422122-01              | .11995432+02 | .70305265+01 |
| .53231762+00                | .14823245+01 | .33659346-01              | .12479257+02 | .73507128+01 |
| .53449878+00                | .14829664+01 | .32867953-01              | .13020238+02 | .77076713+01 |
| .53580748+00                | .14833667+01 | .32377362-01              | .13377316+02 | .79427135+01 |
| .53711617+00                | .14837797+01 | .31873427-01              | .13762795+02 | .81959695+01 |
| .53842486+00                | .14842069+01 | .31354569-01              | .14180791+02 | .84700519+01 |
| .53973356+00                | .14846499+01 | .30818999-01              | .14636339+02 | .87681551+01 |
| .54104225+00                | .14851107+01 | .30264519-01              | .15135689+02 | .90942372+01 |
| .54235095+00                | .14855917+01 | .29688366-01              | .15686725+02 | .94532878+01 |
| .54365964+00                | .14860960+01 | .29087291-01              | .16299604+02 | .98517283+01 |
| .54496834+00                | .14866274+01 | .28456815-01              | .16987694+02 | .10297997+02 |
| .54627703+00                | .14871910+01 | .27791396-01              | .17769110+02 | .10803519+02 |
| .54758573+00                | .14877937+01 | .27083389-01              | .18669235+02 | .11384281+02 |
| .54880647+00                | .14880259+01 | .26811562-01              | .19035229+02 | .11619974+02 |

$$.84871426-04 = \Delta S/R$$

$$.13502548+01 = P_s/P_{\infty}$$

$$.11973831+01 = \rho_s/\rho_{\infty}$$

$$.11276715+01 = T_s/T_{\infty}$$

TABLE 75. CONICAL FLOWFIELD  $\theta_s = 10.0$  DEG;  $M_\infty = 2.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .78684954+00 | .24999923+01 | .17453292+00 | .44559290+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .17453292+00 | .15736696+01 | .17453292+00 | .28356408+01 | .50000000+00 |
| .18238690+00 | .15737600+01 | .16701131+00 | .28766266+01 | .53055505+00 |
| .19024087+00 | .15740075+01 | .16009145+00 | .29198283+01 | .56227026+00 |
| .19809485+00 | .15743829+01 | .15369193+00 | .29653894+01 | .59523480+00 |
| .20594883+00 | .15748633+01 | .14774557+00 | .30134711+01 | .62954683+00 |
| .21380281+00 | .15754312+01 | .14219629+00 | .30642546+01 | .66531460+00 |
| .22165678+00 | .15760725+01 | .13699680+00 | .31179441+01 | .70265893+00 |
| .22951076+00 | .15767761+01 | .13210687+00 | .31747696+01 | .74171303+00 |
| .23649208+00 | .15774464+01 | .12799208+00 | .32281223+01 | .77798352+00 |
| .24347339+00 | .15781540+01 | .12407335+00 | .32843622+01 | .81583964+00 |
| .25045470+00 | .15788946+01 | .12033196+00 | .33437170+01 | .85541084+00 |
| .25743601+00 | .15796650+01 | .11675125+00 | .34064438+01 | .89684162+00 |
| .26441733+00 | .15804625+01 | .11331631+00 | .34728306+01 | .94029341+00 |
| .27139864+00 | .15812850+01 | .11001368+00 | .35432022+01 | .98594733+00 |
| .27837995+00 | .15821307+01 | .10683121+00 | .36179273+01 | .10340077+01 |
| .28448860+00 | .15828890+01 | .10413636+00 | .36872110+01 | .10782157+01 |
| .29059725+00 | .15836636+01 | .10151811+00 | .37604643+01 | .11246170+01 |
| .29670590+00 | .15844542+01 | .98970022+01 | .38380451+01 | .11734078+01 |
| .30281455+00 | .15852606+01 | .96486121+01 | .39203585+01 | .12248094+01 |
| .30892320+00 | .15860827+01 | .94066767+01 | .40078636+01 | .12790721+01 |
| .31503185+00 | .15869209+01 | .91688480+01 | .41010857+01 | .13364810+01 |
| .32114050+00 | .15877754+01 | .89364056+01 | .42006270+01 | .13973622+01 |
| .32637648+00 | .15885212+01 | .87406013+01 | .42915019+01 | .14525928+01 |
| .33161247+00 | .15892799+01 | .85476376+01 | .43880309+01 | .15109198+01 |
| .33684845+00 | .15900520+01 | .83572034+01 | .44907857+01 | .15726503+01 |
| .34208444+00 | .15908382+01 | .81689972+01 | .46004246+01 | .16381370+01 |
| .34732042+00 | .15916394+01 | .79827070+01 | .47177060+01 | .17077852+01 |
| .35255641+00 | .15924565+01 | .77980235+01 | .48435094+01 | .17820639+01 |
| .35779239+00 | .15932908+01 | .76146185+01 | .49788638+01 | .18615203+01 |
| .36215571+00 | .15939999+01 | .74625161+01 | .50998226+01 | .19321493+01 |
| .36651903+00 | .15947228+01 | .73108599+01 | .52290692+01 | .20072509+01 |
| .37088235+00 | .15954604+01 | .71594387+01 | .53675520+01 | .20873261+01 |
| .37524568+00 | .15962139+01 | .70080135+01 | .55163800+01 | .21729591+01 |
| .37960900+00 | .15969847+01 | .68563327+01 | .56768566+01 | .22648353+01 |
| .38397232+00 | .15977743+01 | .67041248+01 | .58505298+01 | .23637667+01 |
| .38833564+00 | .15985846+01 | .65510776+01 | .60392513+01 | .24707221+01 |
| .39182627+00 | .15992496+01 | .64278349+01 | .62025507+01 | .25628404+01 |
| .39531687+00 | .15999312+01 | .63036773+01 | .63782724+01 | .26615499+01 |
| .39880747+00 | .16006302+01 | .61783500+01 | .65680391+01 | .27676943+01 |
| .40229806+00 | .16013483+01 | .60515936+01 | .67737895+01 | .28822793+01 |

TABLE 75. (Concluded)

$$M_{\infty} = .24999923+01$$

$$\Theta_s = .17453292+00$$

| $\underline{\Theta}$ | $\underline{M_1^*}$ | $\underline{\psi_1}$ | $\underline{x}$ | $\underline{r}$ |
|----------------------|---------------------|----------------------|-----------------|-----------------|
| .40578866+00         | .16020874+01        | .59231218-01         | .69978617+01    | .30065154+01    |
| .40927926+00         | .16028500+01        | .57926036-01         | .72431083+01    | .31418763+01    |
| .41276985+00         | .16036388+01        | .56596391-01         | .75130547+01    | .32901790+01    |
| .41538780+00         | .16042496+01        | .55580344-01         | .77343461+01    | .34112479+01    |
| .41800575+00         | .16048788+01        | .54545600-01         | .79742949+01    | .35420439+01    |
| .42062370+00         | .16055285+01        | .53489413-01         | .82356904+01    | .36839958+01    |
| .42324165+00         | .16062008+01        | .52408569-01         | .85219551+01    | .38388537+01    |
| .42585959+00         | .16068988+01        | .51299155-01         | .88373541+01    | .40087936+01    |
| .42847754+00         | .16076260+01        | .50156467-01         | .91872911+01    | .41965674+01    |
| .43109549+00         | .16083867+01        | .48974607-01         | .95787328+01    | .44057151+01    |
| .43284079+00         | .16089152+01        | .48161376-01         | .98671764+01    | .45592651+01    |
| .43458609+00         | .16094631+01        | .47324724-01         | .10181569+02    | .47261156+01    |
| .43633138+00         | .16100328+01        | .46461441-01         | .10526221+02    | .49084456+01    |
| .43807668+00         | .16106273+01        | .45567449-01         | .10906585+02    | .51090049+01    |
| .43982198+00         | .16112505+01        | .44637784-01         | .11329667+02    | .53313228+01    |
| .44156728+00         | .16119070+01        | .43666031-01         | .11804689+02    | .55800363+01    |
| .44331258+00         | .16126033+01        | .42643782-01         | .12344139+02    | .58614120+01    |
| .44505788+00         | .16133477+01        | .41559741-01         | .12965514+02    | .61842156+01    |
| .44559290+00         | .16135872+01        | .41212771-01         | .13176043+02    | .62932879+01    |

$$.49213693-03 = \Delta S/R$$

$$.14938257+01 = P_s/P_{\infty}$$

$$.12720154+01 = \rho_s/\rho_{\infty}$$

$$.11743771+01 = T_s/T_{\infty}$$



TABLE 76. CONICAL FLOWFIELD  $\theta_s = 10.0$  DEG;  $M_\infty = 3.0$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .83275241+00 | .29999978+01 | .17453292+00 | .38392805+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .17453292+00 | .16654736+01 | .17453292+00 | .28356408+01 | .50000000+00 |
| .18064157+00 | .16655324+01 | .16862705+00 | .28752002+01 | .52510476+00 |
| .18675022+00 | .16655966+01 | .16309429+00 | .29167275+01 | .55112133+00 |
| .19285887+00 | .16659505+01 | .15789164+00 | .29603494+01 | .57811502+00 |
| .19896752+00 | .16662817+01 | .15298251+00 | .30062065+01 | .60615749+00 |
| .20507617+00 | .16666797+01 | .14833544+00 | .30544561+01 | .63532771+00 |
| .21118481+00 | .16671362+01 | .14392318+00 | .31052731+01 | .66571278+00 |
| .21729346+00 | .16676443+01 | .13972194+00 | .31588532+01 | .69740925+00 |
| .22340211+00 | .16681983+01 | .13571080+00 | .32154156+01 | .73052438+00 |
| .22863810+00 | .16687062+01 | .13240987+00 | .32664568+01 | .76612819+00 |
| .23387408+00 | .16692420+01 | .12922446+00 | .33200419+01 | .79694540+00 |
| .23911007+00 | .16698037+01 | .12614504+00 | .33763630+01 | .82306844+00 |
| .24434605+00 | .16703895+01 | .12316283+00 | .34356335+01 | .85659947+00 |
| .24958204+00 | .16709980+01 | .12026981+00 | .34980918+01 | .89165223+00 |
| .25481802+00 | .16716283+01 | .11745850+00 | .35640046+01 | .92835347+00 |
| .26005401+00 | .16722794+01 | .11472195+00 | .36336723+01 | .96684524+00 |
| .26528999+00 | .16729507+01 | .11205367+00 | .37074329+01 | .10072870+01 |
| .26965331+00 | .16735252+01 | .10987782+00 | .37723019+01 | .10426074+01 |
| .27451663+00 | .16741134+01 | .10774172+00 | .38405277+01 | .10795234+01 |
| .27837995+00 | .16747151+01 | .10564209+00 | .39123894+01 | .11181653+01 |
| .28274328+00 | .16753305+01 | .10357578+00 | .39881991+01 | .11586787+01 |
| .28710660+00 | .16759598+01 | .10153968+00 | .40683091+01 | .12012267+01 |
| .29146992+00 | .16766032+01 | .99530730+00 | .41531145+01 | .12459937+01 |
| .29583324+00 | .16772611+01 | .97545937+00 | .42430692+01 | .12931883+01 |
| .30019656+00 | .16779339+01 | .95582221+00 | .43386870+01 | .13430476+01 |
| .30368721+00 | .16784834+01 | .94024416+00 | .44196520+01 | .13850346+01 |
| .30717787+00 | .16790432+01 | .92476547+00 | .45049601+01 | .14290571+01 |
| .31066853+00 | .16796138+01 | .90937030+00 | .45949969+01 | .14752917+01 |
| .31415918+00 | .16801958+01 | .89404147+00 | .46901981+01 | .15239373+01 |
| .31764984+00 | .16807897+01 | .87876171+00 | .47910581+01 | .15752193+01 |
| .32114050+00 | .16813962+01 | .86351231+00 | .48981415+01 | .16293943+01 |
| .32463115+00 | .16820160+01 | .84827434+00 | .50120949+01 | .16867558+01 |
| .32812181+00 | .16826501+01 | .83302643+00 | .51336647+01 | .17476415+01 |
| .33073980+00 | .16833357+01 | .82157098+00 | .52303558+01 | .17958514+01 |
| .33335780+00 | .16836303+01 | .81008675+00 | .53322331+01 | .18464507+01 |
| .33597576+00 | .16841352+01 | .79856608+00 | .54397666+01 | .18996508+01 |
| .33859371+00 | .16846506+01 | .78699468+00 | .55534921+01 | .19556922+01 |
| .34121165+00 | .16851770+01 | .77535961+00 | .56740196+01 | .20148905+01 |
| .34382960+00 | .16857152+01 | .76364655+00 | .58020478+01 | .20774320+01 |
| .34644755+00 | .16862658+01 | .75184029+00 | .59383807+01 | .21438023+01 |



TABLE 76. (Concluded)

$$M_{\infty} = .29999978+01$$

$$\Theta_s = .17453292+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $X$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .34906550+00 | .16868301+01 | .73992323-01 | .60839524+01 | .22143752+01 |
| .35081080+00 | .16872143+01 | .73190775-01 | .61866641+01 | .22639948+01 |
| .35255609+00 | .16876055+01 | .72382793-01 | .62943323+01 | .23158604+01 |
| .35430139+00 | .16880040+01 | .71567722-01 | .64073693+01 | .23701546+01 |
| .35604669+00 | .16884103+01 | .70744775-01 | .65262402+01 | .24270834+01 |
| .35779199+00 | .16888250+01 | .69913138-01 | .66514696+01 | .24868787+01 |
| .35953729+00 | .16892484+01 | .69071908-01 | .67836510+01 | .25498026+01 |
| .36128259+00 | .16896814+01 | .68220019-01 | .69234620+01 | .26161538+01 |
| .36302789+00 | .16901247+01 | .67356341-01 | .70716799+01 | .26862743+01 |
| .36390053+00 | .16905504+01 | .66919699-01 | .71492161+01 | .27228689+01 |
| .36477318+00 | .16909790+01 | .66479605-01 | .72291999+01 | .27605577+01 |
| .36564583+00 | .16914106+01 | .66035863-01 | .73117679+01 | .27994008+01 |
| .36651848+00 | .16918453+01 | .65588340-01 | .73970641+01 | .28394612+01 |
| .36739113+00 | .16912832+01 | .65136764-01 | .74852471+01 | .28808084+01 |
| .36826378+00 | .16915246+01 | .64680953-01 | .75764887+01 | .29235176+01 |
| .36913643+00 | .16917695+01 | .64220600-01 | .76709754+01 | .29676703+01 |
| .37000908+00 | .16920181+01 | .63755430-01 | .77689103+01 | .30133553+01 |
| .37088173+00 | .16922707+01 | .63285224-01 | .78705172+01 | .30606700+01 |
| .37175438+00 | .16925274+01 | .62809590-01 | .79760407+01 | .31097214+01 |
| .37262703+00 | .16927884+01 | .62328223-01 | .80857493+01 | .31606262+01 |
| .37349968+00 | .16930541+01 | .61846776-01 | .81999395+01 | .32135137+01 |
| .37437233+00 | .16933245+01 | .61346803-01 | .83189397+01 | .32685266+01 |
| .37524498+00 | .16936001+01 | .60845852-01 | .84431142+01 | .33258231+01 |
| .37611762+00 | .16938811+01 | .60337536-01 | .85728700+01 | .33855801+01 |
| .37699027+00 | .16941680+01 | .59821181-01 | .87086629+01 | .34479950+01 |
| .37786292+00 | .16944609+01 | .59296288-01 | .88510041+01 | .35132895+01 |
| .37873557+00 | .16947606+01 | .58762133-01 | .90004699+01 | .35817128+01 |
| .37960822+00 | .16950673+01 | .58218032-01 | .91577199+01 | .36535503+01 |
| .38048087+00 | .16953816+01 | .57663083-01 | .93235010+01 | .37291245+01 |
| .38135352+00 | .16957042+01 | .57096355-01 | .94986756+01 | .38088076+01 |
| .38222617+00 | .16960358+01 | .56516763-01 | .96842407+01 | .38930292+01 |
| .38309882+00 | .16963771+01 | .55923097-01 | .98813574+01 | .39822894+01 |
| .38397205+00 | .16967113+01 | .55344567-01 | .10080613+02 | .40723115+01 |

$$.10247329+02 = \Delta S/R$$

$$.16616878+01 = P_s/P_{\infty}$$

$$.13562207+01 = \rho_s/\rho_{\infty}$$

$$.12261382+01 = T_s/T_{\infty}$$

7 TABLE 77. CONICAL FLOWFIELD  $\theta_s = 10.0$  DEG;  $M_\infty = 4.0$

| $\underline{u}_s$ | $\underline{M}_\infty$ | $\underline{\theta}_s$ | $\underline{\theta}_w$ |                 |
|-------------------|------------------------|------------------------|------------------------|-----------------|
| .88761230+00      | .39999987+01           | .17453292+00           | .31519220+00           |                 |
| $\underline{e}$   | $\underline{M}_1^*$    | $\underline{\psi}_1$   | $\underline{x}$        | $\underline{r}$ |
| .17453292+00      | .17751913+01           | .17453292+00           | .28356408+01           | .50000000+00    |
| .17802358+00      | .17752123+01           | .17113945+00           | .28659473+01           | .51546529+00    |
| .18151423+00      | .17752726+01           | .16781310+00           | .28973525+01           | .53176365+00    |
| .18500489+00      | .17753688+01           | .16463383+00           | .29299116+01           | .54831801+00    |
| .18849555+00      | .17754977+01           | .16156263+00           | .29636849+01           | .56535310+00    |
| .19198620+00      | .17756570+01           | .15859130+00           | .29987372+01           | .58289541+00    |
| .19547686+00      | .17758441+01           | .15571244+00           | .30351392+01           | .60097369+00    |
| .19896752+00      | .17760570+01           | .15291923+00           | .30729674+01           | .61961886+00    |
| .20245817+00      | .17762942+01           | .15020547+00           | .31123051+01           | .63886441+00    |
| .20594883+00      | .17765539+01           | .14756542+00           | .31532428+01           | .65874665+00    |
| .20943949+00      | .17768349+01           | .14499377+00           | .31958794+01           | .67930505+00    |
| .21293014+00      | .17771360+01           | .14248560+00           | .32403230+01           | .70058253+00    |
| .21642080+00      | .17774562+01           | .14003630+00           | .32866923+01           | .72262606+00    |
| .21991146+00      | .17777946+01           | .13764157+00           | .33351173+01           | .74548694+00    |
| .22340211+00      | .17781506+01           | .13529733+00           | .33857411+01           | .76922139+00    |
| .22689277+00      | .17785234+01           | .13299974+00           | .34387215+01           | .79389128+00    |
| .22951076+00      | .17788139+01           | .13130495+00           | .34861078+01           | .81300484+00    |
| .23212875+00      | .17791135+01           | .12963284+00           | .35229984+01           | .83280139+00    |
| .23474675+00      | .17794220+01           | .12798198+00           | .35674808+01           | .85318425+00    |
| .23736474+00      | .17797393+01           | .12635097+00           | .36136497+01           | .87423371+00    |
| .23998273+00      | .17800654+01           | .12473841+00           | .36616082+01           | .89598966+00    |
| .24260072+00      | .17804003+01           | .12314296+00           | .37114689+01           | .91849552+00    |
| .24521872+00      | .17807440+01           | .12156328+00           | .37633541+01           | .94179842+00    |
| .24783671+00      | .17810964+01           | .11999804+00           | .38173983+01           | .96595009+00    |
| .25045470+00      | .17814577+01           | .11844594+00           | .38737491+01           | .99100699+00    |
| .25307269+00      | .17818279+01           | .11690564+00           | .39325683+01           | .10170311+01    |
| .25569069+00      | .17822073+01           | .11537583+00           | .39940350+01           | .10440907+01    |
| .25830868+00      | .17825958+01           | .11385515+00           | .40583470+01           | .10722613+01    |
| .26092667+00      | .17829939+01           | .11234222+00           | .41257236+01           | .11016261+01    |
| .26354466+00      | .17834018+01           | .11083565+00           | .41964098+01           | .11322780+01    |
| .26616266+00      | .17838197+01           | .10933398+00           | .42706790+01           | .11643205+01    |
| .26790798+00      | .17841041+01           | .10833484+00           | .43223325+01           | .11865113+01    |
| .26965331+00      | .17843933+01           | .10733674+00           | .43758143+01           | .12094091+01    |
| .27139864+00      | .17846873+01           | .10633920+00           | .44312329+01           | .12330547+01    |
| .27314397+00      | .17849864+01           | .10534172+00           | .44887071+01           | .12574928+01    |
| .27488930+00      | .17852907+01           | .10434377+00           | .45483654+01           | .12827714+01    |
| .27663463+00      | .17856004+01           | .10334482+00           | .46103492+01           | .13089435+01    |
| .27837993+00      | .17859162+01           | .10234437+00           | .46748113+01           | .13360663+01    |
| .28012523+00      | .17862381+01           | .10134178+00           | .47419215+01           | .13642030+01    |
| .28187053+00      | .17865659+01           | .10033635+00           | .48118666+01           | .13934233+01    |

TABLE 77. (Concluded)

$$M_{\infty} = .39999987 + 01$$

$$\Theta_s = .17453292 + 00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .28361583+00 | .17869001+01 | .99327419-01 | .48848523+01 | .14238036+01 |
| .28536113+00 | .17872410+01 | .98314196-01 | .49611068+01 | .14554288+01 |
| .28710642+00 | .17875888+01 | .97295996-01 | .50408821+01 | .14883922+01 |
| .28885172+00 | .17879439+01 | .96271873-01 | .51244622+01 | .15227989+01 |
| .29059702+00 | .17883068+01 | .95240951-01 | .52121620+01 | .15587652+01 |
| .29234232+00 | .17886779+01 | .94202254-01 | .53043379+01 | .15964225+01 |
| .29321497+00 | .17888666+01 | .93079603-01 | .53522278+01 | .16159308+01 |
| .29408762+00 | .17890576+01 | .91915460-01 | .54013914+01 | .16359187+01 |
| .29496027+00 | .17892509+01 | .90627086-01 | .54518869+01 | .16564076+01 |
| .29583292+00 | .17894466+01 | .89209689-01 | .55037777+01 | .16774209+01 |
| .29670557+00 | .17896448+01 | .87915638-01 | .55571309+01 | .16989829+01 |
| .29757822+00 | .17898455+01 | .86602773-01 | .56120185+01 | .17211202+01 |
| .29845086+00 | .17900489+01 | .85304883-01 | .56685174+01 | .17438609+01 |
| .29932351+00 | .17902550+01 | .84009456-01 | .57267108+01 | .17672354+01 |
| .30019616+00 | .17904640+01 | .82739917-01 | .57866876+01 | .17912760+01 |
| .30106881+00 | .17906760+01 | .81488826-01 | .58485445+01 | .18160182+01 |
| .30194146+00 | .17908910+01 | .80249436-01 | .59123852+01 | .18414997+01 |
| .30281411+00 | .17911093+01 | .79027355-01 | .59783229+01 | .18677616+01 |
| .30368676+00 | .17913309+01 | .77821719-01 | .60464794+01 | .18948482+01 |
| .30455941+00 | .17915561+01 | .76633455-01 | .61169888+01 | .19228003+01 |
| .30543206+00 | .17917850+01 | .75462963-01 | .61899949+01 | .19516494+01 |
| .30630471+00 | .17920177+01 | .74314501-01 | .62656560+01 | .19813628+01 |
| .30717736+00 | .17922545+01 | .73188646-01 | .63441470+01 | .20124778+01 |
| .30805001+00 | .17924955+01 | .72084272-01 | .64256579+01 | .20445079+01 |
| .30892266+00 | .17927411+01 | .71003674-01 | .65103990+01 | .20777289+01 |
| .30979531+00 | .17929914+01 | .69946745-01 | .65986027+01 | .21122247+01 |
| .31066795+00 | .17932467+01 | .68903258-01 | .66905276+01 | .21480886+01 |
| .31154060+00 | .17935073+01 | .67883051-01 | .67864614+01 | .21854239+01 |
| .31241325+00 | .17937737+01 | .66885869-01 | .68867257+01 | .22243466+01 |
| .31328590+00 | .17940460+01 | .65905672-01 | .69916817+01 | .22649861+01 |
| .31415855+00 | .17943249+01 | .64940416-01 | .71017367+01 | .23074885+01 |
| .31503120+00 | .17946106+01 | .64003998-01 | .72173544+01 | .23520200+01 |
| .3159220+00  | .17946642+01 | .79116091-01 | .72393343+01 | .23604723+01 |

$$.10733038-01 = \Delta S/R$$

$$.20703033+01 = P_s/P_{\infty}$$

$$.15408204+01 = \rho_s/\rho_{\infty}$$

$$.13436370+01 = T_s/T_{\infty}$$

TABLE 78. CONICAL FLOWFIELD  $\theta_s = 10.0$  DEG;  $M_\infty = 5.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .91728915+00 | .49999989+01 | .17453292+00 | .27919680+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .17453292+00 | .18345439+01 | .17453292+00 | .28356408+01 | .50000000+00 |
| .17862358+00 | .18345656+01 | .17110919+00 | .28729070+01 | .51691751+00 |
| .18151423+00 | .18346279+01 | .16781112+00 | .29118031+01 | .53441583+00 |
| .18500489+00 | .18347275+01 | .16462744+00 | .29524341+01 | .55253298+00 |
| .18849555+00 | .18348613+01 | .16154805+00 | .29949150+01 | .57131054+00 |
| .19198620+00 | .18350266+01 | .15856385+00 | .30393735+01 | .59079432+00 |
| .19547686+00 | .18352214+01 | .15566656+00 | .30859506+01 | .61103461+00 |
| .19853118+00 | .18354145+01 | .15319677+00 | .31285660+01 | .62940902+00 |
| .20158551+00 | .18356277+01 | .15078304+00 | .31730386+01 | .64844605+00 |
| .20463983+00 | .18358600+01 | .14842697+00 | .32194958+01 | .66819058+00 |
| .20769416+00 | .18361106+01 | .14610644+00 | .32680779+01 | .68869195+00 |
| .21074848+00 | .18363789+01 | .14383554+00 | .33189404+01 | .71000450+00 |
| .21380281+00 | .18366644+01 | .14160454+00 | .33722556+01 | .73218836+00 |
| .21642080+00 | .18369225+01 | .13972131+00 | .34200509+01 | .75194684+00 |
| .21953879+00 | .18371926+01 | .13786257+00 | .34699225+01 | .77244069+00 |
| .22165678+00 | .18374747+01 | .13602621+00 | .35220175+01 | .79372080+00 |
| .22427478+00 | .18377687+01 | .13421013+00 | .35764988+01 | .81584329+00 |
| .22689277+00 | .18380746+01 | .13241226+00 | .36335469+01 | .83887025+00 |
| .22951076+00 | .18383921+01 | .13063054+00 | .36933624+01 | .86287051+00 |
| .23169242+00 | .18386660+01 | .12915662+00 | .37454837+01 | .88366926+00 |
| .23387408+00 | .18389483+01 | .12769126+00 | .37998261+01 | .90524612+00 |
| .23605574+00 | .18392390+01 | .12623324+00 | .38565482+01 | .92765506+00 |
| .23823740+00 | .18395385+01 | .12478130+00 | .39158253+01 | .95095564+00 |
| .24041906+00 | .18398468+01 | .12333416+00 | .39778524+01 | .97521390+00 |
| .24260072+00 | .18401641+01 | .12189097+00 | .40428459+01 | .10005030+01 |
| .24434605+00 | .18404247+01 | .12073708+00 | .40971382+01 | .10215311+01 |
| .24609138+00 | .18406915+01 | .11958426+00 | .41536208+01 | .10433172+01 |
| .24783671+00 | .18409646+01 | .11843125+00 | .42124447+01 | .10659122+01 |
| .24958203+00 | .18412444+01 | .11727725+00 | .42737756+01 | .10893715+01 |
| .25132733+00 | .18415315+01 | .11612143+00 | .43377975+01 | .11137567+01 |
| .25307263+00 | .18418257+01 | .11496284+00 | .44047155+01 | .11391363+01 |
| .25438160+00 | .18420511+01 | .11409151+00 | .44669405+01 | .11588689+01 |
| .25569057+00 | .18422808+01 | .11321762+00 | .45110277+01 | .11792386+01 |
| .25699955+00 | .18425149+01 | .11234073+00 | .45670918+01 | .12002833+01 |
| .25830852+00 | .18427536+01 | .11146032+00 | .46252587+01 | .12220450+01 |
| .25961750+00 | .18429970+01 | .11057590+00 | .46856661+01 | .12445692+01 |
| .26092647+00 | .18432455+01 | .10968690+00 | .47484645+01 | .12679056+01 |
| .26179912+00 | .18434140+01 | .10909139+00 | .47917401+01 | .12839415+01 |
| .26267177+00 | .18435849+01 | .10849340+00 | .48362058+01 | .13003804+01 |
| .26354442+00 | .18437582+01 | .10789271+00 | .48819181+01 | .13172410+01 |

TABLE 78. (Concluded)

$$M_{\infty} = .49999989+01$$

$$\Theta_s = .17453292+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .26441707+00 | .18439340+01 | .10728912+00 | .49289392+01 | .13345437+01 |
| .26528972+00 | .18441125+01 | .10668242+00 | .49773339+01 | .13523099+01 |
| .26616237+00 | .18442937+01 | .10607237+00 | .50271738+01 | .13705630+01 |
| .26659869+00 | .18443854+01 | .10576601+00 | .50526589+01 | .13798798+01 |
| .26703501+00 | .18444777+01 | .10545871+00 | .50785344+01 | .13893278+01 |
| .26747134+00 | .18445708+01 | .10515045+00 | .51048108+01 | .13989105+01 |
| .26790766+00 | .18446646+01 | .10484120+00 | .51314984+01 | .14086314+01 |
| .26834399+00 | .18447592+01 | .10453090+00 | .51586091+01 | .14184942+01 |
| .26878031+00 | .18448546+01 | .10421954+00 | .51861545+01 | .14285028+01 |
| .26921664+00 | .18449507+01 | .10390706+00 | .52141469+01 | .14386611+01 |
| .26965296+00 | .18450476+01 | .10359344+00 | .52425985+01 | .14489732+01 |
| .27008929+00 | .18451454+01 | .10327861+00 | .52715234+01 | .14594437+01 |
| .27052561+00 | .18452440+01 | .10296256+00 | .53009353+01 | .14700770+01 |
| .27096194+00 | .18453435+01 | .10264523+00 | .53308483+01 | .14808778+01 |
| .27139826+00 | .18454438+01 | .10232658+00 | .53612781+01 | .14918511+01 |
| .27183459+00 | .18455450+01 | .10200655+00 | .53922404+01 | .15030020+01 |
| .27227091+00 | .18456472+01 | .10168511+00 | .54237517+01 | .15143360+01 |
| .27270724+00 | .18457503+01 | .10136220+00 | .54558294+01 | .15258587+01 |
| .27314356+00 | .18458543+01 | .10103776+00 | .54884908+01 | .15375756+01 |
| .27357988+00 | .18459594+01 | .10071175+00 | .55217563+01 | .15494935+01 |
| .27401621+00 | .18460654+01 | .10038410+00 | .55556451+01 | .15616185+01 |
| .27445253+00 | .18461725+01 | .10005475+00 | .55890177+01 | .15739573+01 |
| .27488886+00 | .18462806+01 | .99723674+01 | .56253766+01 | .15865172+01 |
| .27532518+00 | .18463898+01 | .99396730+01 | .56612656+01 | .15993059+01 |
| .27576151+00 | .18465001+01 | .99055916+01 | .56978675+01 | .16123308+01 |
| .27619783+00 | .18466116+01 | .98719131+01 | .57352085+01 | .16256003+01 |
| .27663415+00 | .18467243+01 | .98380305+01 | .57733156+01 | .16391233+01 |
| .27707048+00 | .18468382+01 | .98039366+01 | .58122174+01 | .16529088+01 |
| .27750681+00 | .18469533+01 | .97696230+01 | .58519434+01 | .16669565+01 |
| .27794313+00 | .18470697+01 | .97350784+01 | .58925260+01 | .16813067+01 |
| .27837946+00 | .18471875+01 | .97002987+01 | .59339982+01 | .16959402+01 |
| .27881578+00 | .18473066+01 | .96652698+01 | .59763966+01 | .17108787+01 |
| .27919680+00 | .18474118+01 | .96344702+01 | .60142075+01 | .17241825+01 |

$$.33271655+01 = \Delta S/R$$

$$.25781175+01 = P_s/P_{\infty}$$

$$.17417934+01 = \rho_s/\rho_{\infty}$$

$$.14801512+01 = T_s/T_{\infty}$$

TABLE 79. CONICAL FLOWFIELD  $\theta_s = 10.0$  DEG;  $M_\infty = 6.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .93492117+00 | .59999657+01 | .17453292+00 | .25785279+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .17453292+00 | .18698073+01 | .17453292+00 | .28356408+01 | .50000000+00 |
| .17715091+00 | .18698198+01 | .17195276+00 | .28679665+01 | .51344520+00 |
| .17976891+00 | .18698562+01 | .16944431+00 | .29015001+01 | .52729189+00 |
| .18238690+00 | .18699149+01 | .16700202+00 | .29363093+01 | .54156273+00 |
| .18500489+00 | .18699946+01 | .16462085+00 | .29724679+01 | .55628220+00 |
| .18762288+00 | .18700940+01 | .16229611+00 | .30100561+01 | .57147697+00 |
| .19024087+00 | .18702121+01 | .16002349+00 | .30491618+01 | .58717596+00 |
| .19285887+00 | .18703480+01 | .15779897+00 | .30898809+01 | .60341074+00 |
| .19547686+00 | .18705008+01 | .15561879+00 | .31323186+01 | .62021573+00 |
| .19765852+00 | .18706407+01 | .15383328+00 | .31690793+01 | .63468257+00 |
| .19984018+00 | .18707915+01 | .15207414+00 | .32071863+01 | .64959522+00 |
| .20202184+00 | .18709530+01 | .15033950+00 | .32467190+01 | .66497942+00 |
| .20420350+00 | .18711250+01 | .14862756+00 | .32877636+01 | .68086302+00 |
| .20638516+00 | .18713072+01 | .14693655+00 | .33304137+01 | .69727631+00 |
| .20856682+00 | .18714995+01 | .14526478+00 | .33747723+01 | .71425238+00 |
| .21074848+00 | .18717018+01 | .14361056+00 | .34209517+01 | .73182727+00 |
| .21293014+00 | .18719139+01 | .14197226+00 | .34690752+01 | .75004051+00 |
| .21467547+00 | .18720907+01 | .14067197+00 | .35090648+01 | .76509976+00 |
| .21642080+00 | .18722737+01 | .13937998+00 | .35504613+01 | .78061942+00 |
| .21816613+00 | .18724631+01 | .13809545+00 | .35933472+01 | .79662678+00 |
| .21991146+00 | .18726588+01 | .13681755+00 | .36370120+01 | .81314719+00 |
| .22165678+00 | .18728608+01 | .13554541+00 | .36839534+01 | .83021463+00 |
| .22340211+00 | .18730694+01 | .13427817+00 | .37310780+01 | .84786174+00 |
| .22514744+00 | .18732844+01 | .13301494+00 | .37817024+01 | .86612532+00 |
| .22689277+00 | .18735062+01 | .13175482+00 | .38336542+01 | .88504557+00 |
| .22820177+00 | .18736769+01 | .13081119+00 | .38738577+01 | .89969313+00 |
| .22951076+00 | .18738516+01 | .12986838+00 | .39154452+01 | .91475513+00 |
| .23081976+00 | .18740301+01 | .12892595+00 | .39583066+01 | .93025340+00 |
| .23212875+00 | .18742127+01 | .12798346+00 | .40027572+01 | .94621154+00 |
| .23343775+00 | .18743995+01 | .12704047+00 | .40488638+01 | .96265497+00 |
| .23474672+00 | .18745911+01 | .12609653+00 | .40961182+01 | .97961093+00 |
| .23605570+00 | .18747870+01 | .12515111+00 | .41452935+01 | .99710971+00 |
| .23736467+00 | .18749874+01 | .12420369+00 | .41962696+01 | .10151840+01 |
| .23823732+00 | .18751235+01 | .12357069+00 | .42313100+01 | .10275705+01 |
| .23910997+00 | .18752618+01 | .12293638+00 | .42672381+01 | .10402349+01 |
| .23998262+00 | .18754022+01 | .12230058+00 | .43040929+01 | .10532041+01 |
| .24085527+00 | .18755449+01 | .12166311+00 | .43419154+01 | .10664759+01 |
| .24172792+00 | .18756898+01 | .12102378+00 | .43807502+01 | .10800690+01 |
| .24260057+00 | .18758370+01 | .12038237+00 | .44206447+01 | .10939780+01 |
| .24347322+00 | .18759846+01 | .11973869+00 | .44616492+01 | .11082784+01 |



TABLE 79. (Concluded)

$$M_{\infty} = .59999657+01$$

$$\Theta_s = .17453292+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .24434587+00 | .18761387+01 | .11909250+00 | .45038175+01 | .11229267+01 |
| .24478219+00 | .18762157+01 | .11876839+00 | .45253563+01 | .11303944+01 |
| .24521852+00 | .18762933+01 | .11844356+00 | .45472082+01 | .11379610+01 |
| .24565484+00 | .18763716+01 | .11811798+00 | .45693809+01 | .11456286+01 |
| .24609116+00 | .18764506+01 | .11779163+00 | .45918832+01 | .11534000+01 |
| .24652749+00 | .18765302+01 | .11746446+00 | .46147233+01 | .11612779+01 |
| .24696381+00 | .18766105+01 | .11713644+00 | .46379100+01 | .11692647+01 |
| .24740014+00 | .18766915+01 | .11680754+00 | .46614524+01 | .11773634+01 |
| .24783646+00 | .18767732+01 | .11647772+00 | .46853608+01 | .11855771+01 |
| .24827279+00 | .18768557+01 | .11614694+00 | .47096443+01 | .11939085+01 |
| .24870911+00 | .18769389+01 | .11581516+00 | .47343138+01 | .12023610+01 |
| .24914544+00 | .18770228+01 | .11548235+00 | .47593799+01 | .12109378+01 |
| .24958176+00 | .18771075+01 | .11514847+00 | .47848539+01 | .12196423+01 |
| .25001809+00 | .18771930+01 | .11481347+00 | .48107476+01 | .12284782+01 |
| .25045441+00 | .18772793+01 | .11447731+00 | .48370730+01 | .12374491+01 |
| .25089074+00 | .18773664+01 | .11413993+00 | .48638430+01 | .12465589+01 |
| .25132706+00 | .18774543+01 | .11380130+00 | .48910708+01 | .12558117+01 |
| .25176338+00 | .18775431+01 | .11346136+00 | .49187707+01 | .12652117+01 |
| .25219971+00 | .18776327+01 | .11312005+00 | .49469566+01 | .12747633+01 |
| .25263603+00 | .18777232+01 | .11277733+00 | .49756441+01 | .12844711+01 |
| .25307236+00 | .18778147+01 | .11243314+00 | .50048491+01 | .12943399+01 |
| .25350868+00 | .18779070+01 | .11208743+00 | .50345884+01 | .13043749+01 |
| .25394501+00 | .18780003+01 | .11174013+00 | .50648792+01 | .13145813+01 |
| .25438133+00 | .18780946+01 | .11139117+00 | .50957401+01 | .13249646+01 |
| .25481766+00 | .18781899+01 | .11104051+00 | .51271901+01 | .13355307+01 |
| .25525398+00 | .18782862+01 | .11068807+00 | .51592497+01 | .13462857+01 |
| .25569031+00 | .18783835+01 | .11033377+00 | .51919398+01 | .13572360+01 |
| .25612663+00 | .18784819+01 | .10997754+00 | .52252835+01 | .13683884+01 |
| .25656296+00 | .18785814+01 | .10961932+00 | .52593036+01 | .13797500+01 |
| .25699928+00 | .18786821+01 | .10925901+00 | .52940251+01 | .13913281+01 |
| .25743560+00 | .18787839+01 | .10889652+00 | .53294750+01 | .14031310+01 |
| .25787192+00 | .18788864+01 | .10854783+00 | .53664075+01 | .14146337+01 |

$$.72970927-01 = \Delta S/R$$

$$.31874803+01 = P_s/P_{\infty}$$

$$.19470867+01 = \rho_s/\rho_{\infty}$$

$$.16370494+01 = T_s/T_{\infty}$$

TABLE 80. CONICAL FLOWFIELD  $\theta_s = 10.0$  DEG;  $M_\infty = 8.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .95377129+00 | .79999444+01 | .17453292+00 | .23479788+00 |              |
| $\theta$     | $M^*_1$      | $\psi_1$     | $x$          | $r$          |
| .17453292+00 | .19075068+01 | .17453292+00 | .28356408+01 | .50000000+00 |
| .17584192+00 | .19075100+01 | .17323348+00 | .28552613+01 | .50731420+00 |
| .17715091+00 | .19075196+01 | .17195254+00 | .28753178+01 | .51476128+00 |
| .17845991+00 | .19075352+01 | .17068921+00 | .28958246+01 | .52234560+00 |
| .17976891+00 | .19075568+01 | .16944263+00 | .29167974+01 | .53003718+00 |
| .18107790+00 | .19075840+01 | .16821199+00 | .29382527+01 | .53794511+00 |
| .18238690+00 | .19076160+01 | .16699653+00 | .29602077+01 | .54597046+00 |
| .18369589+00 | .19076549+01 | .16579549+00 | .29826806+01 | .55415339+00 |
| .18500489+00 | .19076983+01 | .16460816+00 | .30056909+01 | .56249972+00 |
| .18631389+00 | .19077469+01 | .16343387+00 | .30292586+01 | .57101546+00 |
| .18762288+00 | .19078003+01 | .16227194+00 | .30534053+01 | .57970706+00 |
| .18893188+00 | .19078587+01 | .16112173+00 | .30781537+01 | .58858125+00 |
| .19024087+00 | .19079218+01 | .15998264+00 | .31035279+01 | .59764523+00 |
| .19154987+00 | .19079897+01 | .15885404+00 | .31295534+01 | .60690650+00 |
| .19285887+00 | .19080621+01 | .15773536+00 | .31562572+01 | .61637311+00 |
| .19416786+00 | .19081390+01 | .15662602+00 | .31836680+01 | .62605350+00 |
| .19547686+00 | .19082205+01 | .15552546+00 | .32118166+01 | .63595674+00 |
| .19678586+00 | .19083063+01 | .15443312+00 | .32407350+01 | .64609232+00 |
| .19809485+00 | .19083965+01 | .15334847+00 | .32704581+01 | .65647043+00 |
| .19940385+00 | .19084911+01 | .15227095+00 | .33010226+01 | .66710187+00 |
| .20071284+00 | .19085900+01 | .15120004+00 | .33324681+01 | .67799823+00 |
| .20202184+00 | .19086931+01 | .15013522+00 | .33648365+01 | .68917176+00 |
| .20333084+00 | .19088005+01 | .14907594+00 | .33981730+01 | .70063563+00 |
| .20463983+00 | .19089122+01 | .14802167+00 | .34325265+01 | .71240407+00 |
| .20594883+00 | .19090282+01 | .14697189+00 | .34679484+01 | .72449207+00 |
| .20725783+00 | .19091485+01 | .14592605+00 | .35044954+01 | .73691603+00 |
| .20856683+00 | .19092731+01 | .14489375+00 | .35422915+01 | .74963985+00 |
| .20987583+00 | .19094021+01 | .14387442+00 | .35812099+01 | .76284291+00 |
| .21118483+00 | .19095356+01 | .14286840+00 | .36212099+01 | .77662603+00 |
| .21249383+00 | .19096731+01 | .14187613+00 | .36622537+01 | .79099000+00 |
| .21380283+00 | .19098146+01 | .14089813+00 | .37044070+01 | .80603416+00 |
| .21511183+00 | .19099601+01 | .14003918+00 | .37477222+01 | .82185827+00 |
| .21642083+00 | .19101096+01 | .13920254+00 | .37922540+01 | .83848272+00 |
| .21772983+00 | .19102631+01 | .13838313+00 | .38380516+01 | .85591815+00 |
| .21903883+00 | .19104206+01 | .13758533+00 | .38851665+01 | .87417699+00 |
| .22034783+00 | .19105821+01 | .13681253+00 | .39336449+01 | .89328723+00 |
| .22165683+00 | .19107476+01 | .13605882+00 | .39835441+01 | .91328723+00 |



TABLE 80. (Concluded)

| $M_{\infty} = .79999444+01$ |                   |                      | $\Theta_s = .17453292+00$ |                 |
|-----------------------------|-------------------|----------------------|---------------------------|-----------------|
| $\underline{\Theta}$        | $\underline{M^*}$ | $\underline{\psi_1}$ | $\underline{x}$           | $\underline{r}$ |
| .22034773+00                | .19105994+01      | .13555799+00         | .39479847+01              | .88428764+00    |
| .22122038+00                | .19107136+01      | .13486380+00         | .39839299+01              | .89599050+00    |
| .22209303+00                | .19108301+01      | .13416800+00         | .40208863+01              | .90798907+00    |
| .22296568+00                | .19109490+01      | .13347033+00         | .40589035+01              | .92029738+00    |
| .22383833+00                | .19110705+01      | .13277054+00         | .40980353+01              | .93293069+00    |
| .22471097+00                | .19111945+01      | .13206833+00         | .41383388+01              | .94590516+00    |
| .22558362+00                | .19113211+01      | .13136341+00         | .41798762+01              | .95923831+00    |
| .22645627+00                | .19114504+01      | .13065546+00         | .42227142+01              | .97294900+00    |
| .22732892+00                | .19115825+01      | .12994415+00         | .42669250+01              | .98705752+00    |
| .22820157+00                | .19117175+01      | .12922912+00         | .43125875+01              | .10015661+01    |
| .22907422+00                | .19118555+01      | .12851001+00         | .43597864+01              | .10165585+01    |
| .22995105+00                | .19119257+01      | .12814879+00         | .43839905+01              | .10242191+01    |
| .22994687+00                | .19119966+01      | .12778690+00         | .44086145+01              | .10320007+01    |
| .23038319+00                | .19120684+01      | .12742278+00         | .44336710+01              | .10399069+01    |
| .23081952+00                | .19121409+01      | .12705786+00         | .44591734+01              | .10479413+01    |
| .23125584+00                | .19122143+01      | .12669161+00         | .44851359+01              | .10561080+01    |
| .23169217+00                | .19122885+01      | .12632394+00         | .45115736+01              | .10644111+01    |
| .23212849+00                | .19123637+01      | .12595480+00         | .45385014+01              | .10728548+01    |
| .23256482+00                | .19124397+01      | .12558413+00         | .45659364+01              | .10814440+01    |
| .23300114+00                | .19125167+01      | .12521185+00         | .45938951+01              | .10901831+01    |
| .23343747+00                | .19125945+01      | .12483788+00         | .46223959+01              | .10990773+01    |
| .23387379+00                | .19126733+01      | .12446217+00         | .46514575+01              | .11081319+01    |
| .23431012+00                | .19127532+01      | .12408462+00         | .46810999+01              | .11173523+01    |
| .23474644+00                | .19128340+01      | .12370516+00         | .47113440+01              | .11267444+01    |
| .23479788+00                | .19128436+01      | .12366029+00         | .47149504+01              | .11278633+01    |

$$.20295519+00 = \Delta S/R$$

$$.47175853+01 = P_s/P_{\infty}$$

$$.23386530+01 = \rho_s/\rho_{\infty}$$

$$.20172233+01 = T_s/T_{\infty}$$

TABLE 81. CONICAL FLOWFIELD  $\theta_s = 10.0$  DEG;  $M_\infty = 10.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .96303146+00 | .99999999+01 | .17453292+00 | .22328402+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .17453292+00 | .19260268+01 | .17453292+00 | .28356408+01 | .50000000+00 |
| .17540558+00 | .19260283+01 | .17366452+00 | .28504454+01 | .50517561+00 |
| .17627825+00 | .19260326+01 | .17280444+00 | .28654958+01 | .51042252+00 |
| .17715091+00 | .19260397+01 | .17195235+00 | .28807980+01 | .51574240+00 |
| .17802358+00 | .19260496+01 | .17110398+00 | .28963587+01 | .52113714+00 |
| .17889624+00 | .19260621+01 | .17027101+00 | .29121845+01 | .52660871+00 |
| .17976891+00 | .19260773+01 | .16944117+00 | .29282826+01 | .53215911+00 |
| .18064157+00 | .19260950+01 | .16861819+00 | .29446605+01 | .53779046+00 |
| .18151423+00 | .19261153+01 | .16780180+00 | .29613257+01 | .54350493+00 |
| .18238690+00 | .19261380+01 | .16699175+00 | .29782864+01 | .54930483+00 |
| .18325956+00 | .19261632+01 | .16618778+00 | .29955506+01 | .55519245+00 |
| .18413223+00 | .19261907+01 | .16538965+00 | .30131273+01 | .56117031+00 |
| .18500489+00 | .19262206+01 | .16459712+00 | .30310256+01 | .56724098+00 |
| .18587755+00 | .19262528+01 | .16380996+00 | .30492547+01 | .57340708+00 |
| .18675022+00 | .19262873+01 | .16302793+00 | .30678246+01 | .57967142+00 |
| .18762288+00 | .19263241+01 | .16225082+00 | .30867459+01 | .58603697+00 |
| .18849555+00 | .19263631+01 | .16147840+00 | .31060290+01 | .59250667+00 |
| .18936821+00 | .19264043+01 | .16071046+00 | .31256853+01 | .59908371+00 |
| .19024087+00 | .19264477+01 | .15994678+00 | .31457265+01 | .60577139+00 |
| .19111354+00 | .19264933+01 | .15918716+00 | .31661649+01 | .61257315+00 |
| .19198620+00 | .19265413+01 | .15843138+00 | .31870137+01 | .61949266+00 |
| .19285887+00 | .19265908+01 | .15767924+00 | .32082863+01 | .62653366+00 |
| .19373153+00 | .19266428+01 | .15693054+00 | .32299971+01 | .63370017+00 |
| .19460420+00 | .19266968+01 | .15618507+00 | .32521607+01 | .64099628+00 |
| .19547686+00 | .19267530+01 | .15544262+00 | .32747931+01 | .64842642+00 |
| .19634952+00 | .19268112+01 | .15470301+00 | .32979104+01 | .65599509+00 |
| .19722219+00 | .19268716+01 | .15396602+00 | .33215304+01 | .66370720+00 |
| .19809485+00 | .19269340+01 | .15323145+00 | .33456711+01 | .67156774+00 |
| .19896752+00 | .19269985+01 | .15249910+00 | .33703518+01 | .67958205+00 |
| .19984018+00 | .19270651+01 | .15176877+00 | .33955929+01 | .68775578+00 |
| .20071284+00 | .19271338+01 | .15104025+00 | .34214157+01 | .69609480+00 |
| .20158551+00 | .19272045+01 | .15031333+00 | .34478429+01 | .70460540+00 |
| .20245817+00 | .19272774+01 | .14958780+00 | .34748985+01 | .71329415+00 |
| .20333084+00 | .19273525+01 | .14886345+00 | .35026078+01 | .72216801+00 |
| .20420350+00 | .19274296+01 | .14814007+00 | .35309981+01 | .73123445+00 |
| .20507617+00 | .19275089+01 | .14741742+00 | .35600974+01 | .74050123+00 |
| .20594883+00 | .19275904+01 | .14669529+00 | .35899363+01 | .74997666+00 |
| .20682149+00 | .19276740+01 | .14597345+00 | .36205471+01 | .75966963+00 |
| .20769416+00 | .19277599+01 | .14525165+00 | .36519642+01 | .76958947+00 |
| .20856682+00 | .19278480+01 | .14452965+00 | .36842239+01 | .77974614+00 |

TABLE 81. (Concluded)

$$M_{\infty} = .99999970+01$$

$$\Theta_s = .17453292+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $\bar{x}$    | $\bar{r}$    |
|--------------|--------------|--------------|--------------|--------------|
| .20943947+00 | .19279389+01 | .14386722+00 | .37173653+01 | .79015023+00 |
| .21031212+00 | .19280320+01 | .14308408+00 | .37514305+01 | .80081323+00 |
| .21118477+00 | .19281275+01 | .14235995+00 | .37864648+01 | .81174743+00 |
| .21205742+00 | .19282254+01 | .14163457+00 | .38225157+01 | .82296576+00 |
| .21293007+00 | .19283258+01 | .14090762+00 | .38596353+01 | .83448227+00 |
| .21380272+00 | .19284286+01 | .14017881+00 | .38978792+01 | .84631206+00 |
| .21467537+00 | .19285342+01 | .13944781+00 | .39373075+01 | .85847131+00 |
| .21554802+00 | .19286423+01 | .13871427+00 | .39779848+01 | .87097751+00 |
| .21642067+00 | .19287532+01 | .13797786+00 | .40199813+01 | .88384952+00 |
| .21685699+00 | .19288696+01 | .13760845+00 | .40414975+01 | .89042899+00 |
| .21729331+00 | .19288668+01 | .13723817+00 | .40633726+01 | .89710773+00 |
| .21772964+00 | .19289247+01 | .13686698+00 | .40856173+01 | .90388862+00 |
| .21816596+00 | .19289834+01 | .13649482+00 | .41082426+01 | .91077461+00 |
| .21860229+00 | .19290428+01 | .13612163+00 | .41312596+01 | .91776871+00 |
| .21903861+00 | .19291030+01 | .13574736+00 | .41546806+01 | .92487416+00 |
| .21947494+00 | .19291639+01 | .13537195+00 | .41785180+01 | .93209434+00 |
| .21991126+00 | .19292256+01 | .13499534+00 | .42027851+01 | .93943276+00 |
| .22034759+00 | .19292882+01 | .13461747+00 | .42274960+01 | .94689323+00 |
| .22078391+00 | .19293516+01 | .13423827+00 | .42526646+01 | .95447940+00 |
| .22122024+00 | .19294158+01 | .13385768+00 | .42783067+01 | .96219557+00 |
| .22165656+00 | .19294808+01 | .13347562+00 | .43044378+01 | .97004578+00 |
| .22209289+00 | .19295468+01 | .13309203+00 | .43310747+01 | .97803460+00 |
| .22252921+00 | .19296136+01 | .13270681+00 | .43582349+01 | .98616663+00 |
| .22296553+00 | .19296813+01 | .13231991+00 | .43859375+01 | .99444696+00 |
| .22328402+00 | .19297314+01 | .13203638+00 | .44065114+01 | .10005874+01 |

$$.38479304+00 = \Delta S/R$$

$$.66695741+01 = P_s/P_{\infty}$$

$$.26767116+01 = \rho_s/\rho_{\infty}$$

$$.24917045+01 = T_s/T_{\infty}$$

TABLE 82. CONICAL FLOWFIELD  $\theta_s = 10.0$  DEG;  $M_\infty = 12.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .96916698+00 | .12499999+02 | .17453292+00 | .21555177+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .17453292+00 | .19382976+01 | .17453292+00 | .28356408+01 | .50000000+00 |
| .17540558+00 | .19382991+01 | .17366451+00 | .28520261+01 | .50545575+00 |
| .17627825+00 | .19383034+01 | .17280438+00 | .28687111+01 | .51099525+00 |
| .17715091+00 | .19383106+01 | .17195217+00 | .28857044+01 | .51662077+00 |
| .17802358+00 | .19383206+01 | .17110754+00 | .29030146+01 | .52233474+00 |
| .17889624+00 | .19383332+01 | .17027016+00 | .29206515+01 | .52813978+00 |
| .17976891+00 | .19383485+01 | .16943973+00 | .29386245+01 | .53403855+00 |
| .18064157+00 | .19383663+01 | .16861591+00 | .29569441+01 | .54003385+00 |
| .18151423+00 | .19383867+01 | .16779844+00 | .29756211+01 | .54612862+00 |
| .18238690+00 | .19384096+01 | .16698699+00 | .29946667+01 | .55232595+00 |
| .18325956+00 | .19384350+01 | .16618130+00 | .30140924+01 | .55862895+00 |
| .18413223+00 | .19384628+01 | .16538109+00 | .30339107+01 | .56504104+00 |
| .18500489+00 | .19384930+01 | .16458608+00 | .30541347+01 | .57156574+00 |
| .18587755+00 | .19385256+01 | .16379601+00 | .30747776+01 | .57820662+00 |
| .18675022+00 | .19385605+01 | .16301061+00 | .30958539+01 | .58496761+00 |
| .18762288+00 | .19385977+01 | .16222963+00 | .31173784+01 | .59185275+00 |
| .18849555+00 | .19386372+01 | .16145282+00 | .31393669+01 | .59886622+00 |
| .18936821+00 | .19386790+01 | .16067991+00 | .31618359+01 | .60601252+00 |
| .19024087+00 | .19387231+01 | .15991067+00 | .31848028+01 | .61329629+00 |
| .19111354+00 | .19387693+01 | .15914484+00 | .32082860+01 | .62072252+00 |
| .19198620+00 | .19388178+01 | .15838218+00 | .32323048+01 | .62829636+00 |
| .19285887+00 | .19388686+01 | .15762245+00 | .32568797+01 | .63602327+00 |
| .19373153+00 | .19389215+01 | .15686538+00 | .32820322+01 | .64390906+00 |
| .19460420+00 | .19389767+01 | .15611075+00 | .33077854+01 | .65195984+00 |
| .19547686+00 | .19390341+01 | .15535830+00 | .33341632+01 | .66018204+00 |
| .19591319+00 | .19390936+01 | .15498281+00 | .33611916+01 | .66858251+00 |
| .19634952+00 | .19391556+01 | .15460777+00 | .33888976+01 | .67716849+00 |
| .19678586+00 | .19392197+01 | .15423316+00 | .34173103+01 | .68594768+00 |
| .19722219+00 | .19392868+01 | .15385893+00 | .34464604+01 | .69492823+00 |
| .19765852+00 | .19393548+01 | .15348506+00 | .34763806+01 | .70411803+00 |
| .19809485+00 | .19394255+01 | .15311151+00 | .35071062+01 | .71352874+00 |
| .19853118+00 | .19394986+01 | .15273825+00 | .35227824+01 | .71831898+00 |
| .19896752+00 | .19395361+01 | .15236525+00 | .35386740+01 | .72316774+00 |
| .19940385+00 | .19395797+01 | .15199248+00 | .35547862+01 | .72807646+00 |
| .19984018+00 | .19396297+01 | .15161989+00 |              |              |
| .20027651+00 | .19396861+01 | .15124747+00 |              |              |
| .20071284+00 | .19397488+01 | .15087517+00 |              |              |
| .20114918+00 | .19398178+01 | .15050295+00 |              |              |
| .20158551+00 | .19398931+01 | .15013079+00 |              |              |
| .20202184+00 | .19399747+01 | .14975864+00 |              |              |

TABLE 82. (Concluded)

$$M_{\infty} = .12499999 + j0.2$$

$$\Theta_s = .17453292 + j0.0$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .20245817+00 | .19395742+01 | .14938648+00 | .35711240+01 | .73304641+00 |
| .20289451+00 | .19396128+01 | .14901426+00 | .35876932+01 | .73807909+00 |
| .20333084+00 | .19396521+01 | .14864195+00 | .36044993+01 | .74317599+00 |
| .20376716+00 | .19396921+01 | .14826951+00 | .36215476+01 | .74833851+00 |
| .20420349+00 | .19397327+01 | .14789689+00 | .36388450+01 | .75356842+00 |
| .20463981+00 | .19397740+01 | .14752407+00 | .36563972+01 | .75886725+00 |
| .20507614+00 | .19398158+01 | .14715100+00 | .36742108+01 | .76423675+00 |
| .20551246+00 | .19398583+01 | .14677763+00 | .36922927+01 | .76967867+00 |
| .20594878+00 | .19399014+01 | .14640393+00 | .37106501+01 | .77519493+00 |
| .20638511+00 | .19399452+01 | .14602986+00 | .37292899+01 | .78078733+00 |
| .20682143+00 | .19399896+01 | .14565537+00 | .37482200+01 | .78645793+00 |
| .20725776+00 | .19400346+01 | .14528040+00 | .37674481+01 | .79220878+00 |
| .20769408+00 | .19400802+01 | .14490493+00 | .37869822+01 | .79804192+00 |
| .20813041+00 | .19401266+01 | .14452890+00 | .38068310+01 | .80395965+00 |
| .20856673+00 | .19401736+01 | .14415226+00 | .38270034+01 | .80996430+00 |
| .20900306+00 | .19402213+01 | .14377497+00 | .38475086+01 | .81605823+00 |
| .20943938+00 | .19402697+01 | .14339697+00 | .38683565+01 | .82224403+00 |
| .20987571+00 | .19403188+01 | .14301821+00 | .38895569+01 | .82852425+00 |
| .21031203+00 | .19403686+01 | .14263863+00 | .39111203+01 | .83490164+00 |
| .21074836+00 | .19404191+01 | .14225818+00 | .39330575+01 | .84137901+00 |
| .21118468+00 | .19404704+01 | .14187680+00 | .39553804+01 | .84795940+00 |
| .21162101+00 | .19405224+01 | .14149443+00 | .39781005+01 | .85464588+00 |
| .21205733+00 | .19405752+01 | .14111101+00 | .40012306+01 | .86144166+00 |
| .21249365+00 | .19406287+01 | .14072647+00 | .40247840+01 | .86835025+00 |
| .21292998+00 | .19406830+01 | .14034076+00 | .40487742+01 | .87537514+00 |
| .21336630+00 | .19407381+01 | .13995379+00 | .40732158+01 | .88252012+00 |
| .21380263+00 | .19407940+01 | .13956549+00 | .40981240+01 | .88978905+00 |
| .21423895+00 | .19408508+01 | .13917581+00 | .41235143+01 | .89718600+00 |
| .21467528+00 | .19409084+01 | .13878465+00 | .41494040+01 | .90471542+00 |
| .21511160+00 | .19409668+01 | .13839193+00 | .41758105+01 | .91238175+00 |
| .21554793+00 | .19410262+01 | .13799758+00 | .42027524+01 | .92018984+00 |
| .21555177+00 | .19410267+01 | .13799410+00 | .42029922+01 | .92025928+00 |

$$.65275636+00 = \Delta S/R$$

$$.97088604+01 = P_s/P_{\infty}$$

$$.30122452+01 = \rho_s/\rho_{\infty}$$

$$.32231309+01 = T_s/T_{\infty}$$

TABLE 83. CONICAL FLOWFIELD  $\theta_s = 10.0$  DEG;  $M_\infty = 15.0$

| $\underline{u}_s$    | $\underline{M}_\infty$ | $\underline{\theta}_s$ | $\underline{\theta}_w$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .97257568+00         | .14999999+02           | .17453292+00           | .21121192+00           |                 |
| $\underline{\theta}$ | $\underline{M}_1^*$    | $\underline{\psi}_1$   | $\underline{x}$        | $\underline{r}$ |
| .17453292+00         | .19451149+01           | .47453292+00           | .28356408+01           | .50000000+00    |
| .17540558+00         | .19451164+01           | .17366451+00           | .28531211+01           | .50564982+00    |
| .17627825+00         | .19451208+01           | .47280434+00           | .28709418+01           | .51139259+00    |
| .17715091+00         | .19451279+01           | .17195203+00           | .28891131+01           | .51723103+00    |
| .17802358+00         | .19451379+01           | .17110721+00           | .29076460+01           | .52316806+00    |
| .17889624+00         | .19451506+01           | .17026953+00           | .29265521+01           | .52920679+00    |
| .17976891+00         | .19451659+01           | .16943864+00           | .29458433+01           | .53535043+00    |
| .18064157+00         | .19451839+01           | .16861421+00           | .29655325+01           | .54160236+00    |
| .18151423+00         | .19452044+01           | .16779590+00           | .29856329+01           | .54796613+00    |
| .18238690+00         | .19452274+01           | .16698342+00           | .30061584+01           | .55444544+00    |
| .18325956+00         | .19452529+01           | .16617643+00           | .30271236+01           | .56104415+00    |
| .18413223+00         | .19452809+01           | .16537465+00           | .30485440+01           | .56776638+00    |
| .18500489+00         | .19453113+01           | .16457777+00           | .30704360+01           | .57461645+00    |
| .18587755+00         | .19453440+01           | .16378550+00           | .30928165+01           | .58159880+00    |
| .18675022+00         | .19453792+01           | .16299755+00           | .31157037+01           | .58871827+00    |
| .18762288+00         | .19454167+01           | .16221363+00           | .31391165+01           | .59597984+00    |
| .18849555+00         | .19454566+01           | .16143348+00           | .31630751+01           | .60338879+00    |
| .18936821+00         | .19454987+01           | .16065679+00           | .31876007+01           | .61095072+00    |
| .19024087+00         | .19455432+01           | .15988933+00           | .32127157+01           | .61867148+00    |
| .19111354+00         | .19455900+01           | .15911273+00           | .32384438+01           | .62655730+00    |
| .19198620+00         | .19456391+01           | .15834478+00           | .32648107+01           | .63461485+00    |
| .19285887+00         | .19456904+01           | .15757920+00           | .32918428+01           | .64285108+00    |
| .19373153+00         | .19457441+01           | .15681569+00           | .33195688+01           | .65127344+00    |
| .19460420+00         | .19458001+01           | .15605397+00           | .33480189+01           | .65988981+00    |
| .19547686+00         | .19458583+01           | .15529375+00           | .33772255+01           | .66870860+00    |
| .19634952+00         | .19458884+01           | .15491411+00           | .33921231+01           | .67319664+00    |
| .19722219+00         | .19459189+01           | .15453474+00           | .34072229+01           | .67773870+00    |
| .19809485+00         | .19459501+01           | .15415559+00           | .34225296+01           | .68233597+00    |
| .19896752+00         | .19459819+01           | .15377663+00           | .34380479+01           | .68698969+00    |
| .19984018+00         | .19460142+01           | .15339783+00           | .34537830+01           | .69170117+00    |
| .20071284+00         | .19460472+01           | .15301913+00           | .34697399+01           | .69647174+00    |
| .20158549+00         | .19460807+01           | .15264051+00           | .34859239+01           | .70130276+00    |
| .20245815+00         | .19461149+01           | .15226193+00           | .35023409+01           | .70619572+00    |
| .20333080+00         | .19461496+01           | .15188333+00           | .35189963+01           | .71115206+00    |
| .20420345+00         | .19461850+01           | .15150469+00           | .35358962+01           | .71617333+00    |
| .20507610+00         | .19462209+01           | .15112596+00           | .35530468+01           | .72126111+00    |
| .20594875+00         | .19462577+01           | .15074709+00           | .35704544+01           | .72641705+00    |
| .20682140+00         | .19462950+01           | .15036805+00           | .35881255+01           | .73164280+00    |
| .20769405+00         | .19463330+01           | .14998879+00           | .36060673+01           | .73694024+00    |
| .20856670+00         | .19463717+01           | .14960927+00           | .36242870+01           | .74231119+00    |



TABLE 83. (Concluded)

| $M_\infty = .14999999+02$ | $\Theta_s = .17453292+00$ |              |              |              |
|---------------------------|---------------------------|--------------|--------------|--------------|
| $\Theta$                  | $M_1^*$                   | $\psi_1$     | $\pi$        | $\tau$       |
| .20245814+00              | .19464116+01              | .14922943+00 | .36427923+01 | .74775764+00 |
| .20289446+00              | .19464509+01              | .14884924+00 | .36615905+01 | .75328148+00 |
| .20333079+00              | .19464915+01              | .14846863+00 | .36806900+01 | .75888480+00 |
| .20376711+00              | .19465327+01              | .14808757+00 | .37000991+01 | .76456980+00 |
| .20420343+00              | .19465746+01              | .14770601+00 | .37198265+01 | .77033868+00 |
| .20463976+00              | .19466171+01              | .14732388+00 | .37398816+01 | .77619383+00 |
| .20507608+00              | .19466604+01              | .14694115+00 | .37602738+01 | .78213765+00 |
| .20551241+00              | .19467043+01              | .14655775+00 | .37810130+01 | .78817268+00 |
| .20594873+00              | .19467489+01              | .14617362+00 | .38021096+01 | .79430158+00 |
| .20638506+00              | .19467943+01              | .14578872+00 | .38235745+01 | .80052713+00 |
| .20682138+00              | .19468403+01              | .14540297+00 | .38454189+01 | .80685218+00 |
| .20725771+00              | .19468871+01              | .14501633+00 | .38676547+01 | .81327973+00 |
| .20769403+00              | .19469346+01              | .14462871+00 | .38902945+01 | .81981302+00 |
| .20813036+00              | .19469829+01              | .14424007+00 | .39133512+01 | .82645530+00 |
| .20856668+00              | .19470319+01              | .14385033+00 | .39368384+01 | .83321005+00 |
| .20900301+00              | .19470818+01              | .14345943+00 | .39607702+01 | .84008086+00 |
| .20943933+00              | .19471324+01              | .14306728+00 | .39851618+01 | .84707152+00 |
| .20987565+00              | .19471838+01              | .14267381+00 | .40100292+01 | .85418615+00 |
| .21031198+00              | .19472361+01              | .14227894+00 | .40353888+01 | .86142885+00 |
| .21074830+00              | .19472892+01              | .14188259+00 | .40612584+01 | .86880416+00 |
| .21118463+00              | .19473432+01              | .14148468+00 | .40876559+01 | .87631658+00 |
| .21162192+00              | .19473966+01              | .14108597+00 | .40893247+01 | .87679106+00 |

$$.93781462+00 = \Delta S/R$$

$$.13417678+02 = P_s/P_\infty$$

$$.32634197+01 = \rho_s/\rho_\infty$$

$$.41115395+01 = T_s/T_\infty$$

TABLE 84. CONICAL FLOWFIELD  $\theta_s = 10.0$  DEG;  $M_\infty = 17.5$

| $\underline{u_s}$    | $\underline{M_\infty}$ | $\underline{\theta_s}$ | $\underline{\theta_w}$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .97465874+00         | .17499996+02           | .17453292+00           | .20854227+00           |                 |
| $\underline{\theta}$ | $\underline{M_1^*}$    | $\underline{\psi_1}$   | $\underline{x}$        | $\underline{r}$ |
| .17453292+00         | .19492809+01           | .17453292+00           | .28356408+01           | .50000000+00    |
| .17540558+00         | .19492824+01           | .17366450+00           | .28538949+01           | .50578696+00    |
| .17627825+00         | .19492868+01           | .17280431+00           | .28725196+01           | .51167365+00    |
| .17715091+00         | .19492940+01           | .17195192+00           | .28915268+01           | .51766315+00    |
| .17802358+00         | .19493040+01           | .17110697+00           | .29109290+01           | .52375876+00    |
| .17889624+00         | .19493167+01           | .17026906+00           | .29307394+01           | .52996398+00    |
| .17976891+00         | .19493321+01           | .16943783+00           | .29509718+01           | .53628244+00    |
| .18064157+00         | .19493501+01           | .16861293+00           | .29716409+01           | .54271796+00    |
| .18151423+00         | .19493707+01           | .16779402+00           | .29927621+01           | .54927458+00    |
| .18238690+00         | .19493937+01           | .16698075+00           | .30143515+01           | .55595655+00    |
| .18325956+00         | .19494193+01           | .16617280+00           | .30364259+01           | .56276824+00    |
| .18413223+00         | .19494474+01           | .16536984+00           | .30590037+01           | .56971440+00    |
| .18500489+00         | .19494779+01           | .16457156+00           | .30821037+01           | .57679999+00    |
| .18584122+00         | .19494941+01           | .16417408+00           | .30938556+01           | .58003966+00    |
| .18587755+00         | .19495109+01           | .16377764+00           | .31057457+01           | .58403012+00    |
| .18631389+00         | .19495282+01           | .16338222+00           | .31177767+01           | .58770113+00    |
| .18675022+00         | .19495462+01           | .16298778+00           | .31299513+01           | .59141039+00    |
| .18718655+00         | .19495648+01           | .16259427+00           | .31422722+01           | .59515858+00    |
| .18762288+00         | .19495839+01           | .16220167+00           | .31547426+01           | .59894656+00    |
| .18805921+00         | .19496036+01           | .16180992+00           | .31673653+01           | .60277499+00    |
| .18849555+00         | .19496240+01           | .16141899+00           | .31801435+01           | .60664477+00    |
| .18893188+00         | .19496449+01           | .16102885+00           | .31930803+01           | .61055665+00    |
| .18936821+00         | .19496664+01           | .16063946+00           | .32061792+01           | .61451156+00    |
| .18980454+00         | .19496885+01           | .16025078+00           | .32194432+01           | .61851028+00    |
| .19024087+00         | .19497112+01           | .15986276+00           | .32328763+01           | .62255379+00    |
| .19067721+00         | .19497345+01           | .15947538+00           | .32464817+01           | .62664299+00    |
| .19111354+00         | .19497583+01           | .15908860+00           | .32602634+01           | .63077883+00    |
| .19154987+00         | .19497828+01           | .15870237+00           | .32742251+01           | .63496231+00    |
| .19198620+00         | .19498078+01           | .15831666+00           | .32883708+01           | .63919447+00    |
| .19242254+00         | .19498334+01           | .15793143+00           | .33027046+01           | .64347632+00    |
| .19285887+00         | .19498596+01           | .15754665+00           | .33172307+01           | .64780898+00    |
| .19329520+00         | .19498864+01           | .15716226+00           | .33319535+01           | .65219355+00    |
| .19373153+00         | .19499138+01           | .15677823+00           | .33468775+01           | .65663121+00    |
| .19416786+00         | .19499418+01           | .15639453+00           | .33620073+01           | .66112309+00    |
| .19460420+00         | .19499703+01           | .15601111+00           | .33773479+01           | .66567051+00    |
| .19504053+00         | .19499995+01           | .15562793+00           | .33929040+01           | .67027467+00    |
| .19547686+00         | .19500293+01           | .15524496+00           | .34086812+01           | .67493697+00    |
| .19591319+00         | .19500596+01           | .15486214+00           | .34246845+01           | .67965873+00    |
| .19634952+00         | .19500906+01           | .15447944+00           | .34409199+01           | .68444145+00    |
| .19678586+00         | .19501222+01           | .15409682+00           | .34573926+01           | .68928648+00    |



TABLE 84. (Concluded)

$$M_{\infty} = .17499996 + 02$$

$$\Theta_s = .17453292 + 00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .19722219+00 | .19501543+01 | .15371423+00 | .34741092+01 | .69419544+00 |
| .19765852+00 | .19501871+01 | .15333162+00 | .34916754+01 | .69916985+00 |
| .19809485+00 | .19502200+01 | .15294896+00 | .35082977+01 | .70421134+00 |
| .19853118+00 | .19502546+01 | .15256620+00 | .35257828+01 | .70932162+00 |
| .19896751+00 | .19502894+01 | .15218330+00 | .35435373+01 | .71450235+00 |
| .19940383+00 | .19503249+01 | .15180020+00 | .35615689+01 | .71975546+00 |
| .19984016+00 | .19503610+01 | .15141686+00 | .35798852+01 | .72508293+00 |
| .20027648+00 | .19503978+01 | .15103322+00 | .35984937+01 | .73048663+00 |
| .20071281+00 | .19504352+01 | .15064925+00 | .36174025+01 | .73596864+00 |
| .20114913+00 | .19504732+01 | .15026488+00 | .36366203+01 | .74153111+00 |
| .20158546+00 | .19505119+01 | .14988007+00 | .36561558+01 | .74717628+00 |
| .20202178+00 | .19505513+01 | .14949476+00 | .36760179+01 | .75290640+00 |
| .20245811+00 | .19505914+01 | .14910890+00 | .36962168+01 | .75872400+00 |
| .20289443+00 | .19506322+01 | .14872243+00 | .37167619+01 | .76463149+00 |
| .20333076+00 | .19506736+01 | .14833529+00 | .37376640+01 | .77063159+00 |
| .20376708+00 | .19507158+01 | .14794742+00 | .37589338+01 | .77672698+00 |
| .20420340+00 | .19507586+01 | .14755876+00 | .37805826+01 | .78292054+00 |
| .20463973+00 | .19508022+01 | .14716925+00 | .38026227+01 | .78921533+00 |
| .20507605+00 | .19508465+01 | .14677883+00 | .38250663+01 | .79561439+00 |
| .20551238+00 | .19508916+01 | .14638742+00 | .38479266+01 | .80212107+00 |
| .20594870+00 | .19509374+01 | .14599495+00 | .38712172+01 | .80873879+00 |
| .20638503+00 | .19509840+01 | .14560135+00 | .38949530+01 | .81547125+00 |
| .20682135+00 | .19510314+01 | .14520656+00 | .39191486+01 | .82232215+00 |
| .20725768+00 | .19510796+01 | .14481048+00 | .39438201+01 | .82929546+00 |
| .20769400+00 | .19511286+01 | .14441304+00 | .39689842+01 | .83639541+00 |
| .20813033+00 | .19511784+01 | .14401415+00 | .39946589+01 | .84362642+00 |
| .20856665+00 | .19512262+01 | .14361365+00 | .40208330+01 | .85097785+00 |

$$.12224615+01 = \Delta S/R$$

$$.17747664+02 = P_s/P_{\infty}$$

$$.34601116+01 = \rho_s/\rho_{\infty}$$

$$.51586767+01 = T_s/T_{\infty}$$

TABLE 85. CONICAL FLOWFIELD  $\theta_s = 10.0$  DEG;  $M_\infty = 20.0$

| $\underline{u_s}$    | $\underline{M_\infty}$ | $\underline{\theta_s}$ | $\underline{\theta_w}$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .97602226+00         | .19799983+02           | .17453292+00           | .20678689+00           |                 |
| $\underline{\theta}$ | $\underline{M^*_1}$    | $\underline{\psi_1}$   | $\underline{x}$        | $\underline{r}$ |
| .17453292+00         | .19520079+01           | .17453292+00           | .28356408+01           | .50000000+00    |
| .17540558+00         | .19520094+01           | .17366450+00           | .28544543+01           | .50588611+00    |
| .17627825+00         | .19520138+01           | .17284428+00           | .28736614+01           | .51187703+00    |
| .17715091+00         | .19520210+01           | .17195185+00           | .28932748+01           | .51797608+00    |
| .17802358+00         | .19520310+01           | .17110678+00           | .29133082+01           | .52418684+00    |
| .17889624+00         | .19520438+01           | .17026871+00           | .29337762+01           | .53051313+00    |
| .17976891+00         | .19520592+01           | .16943723+00           | .29546943+01           | .53695893+00    |
| .18064157+00         | .19520772+01           | .16861198+00           | .29760784+01           | .54352839+00    |
| .18151423+00         | .19520978+01           | .16779261+00           | .29979457+01           | .55022595+00    |
| .18238690+00         | .19521210+01           | .16697875+00           | .30203139+01           | .55705625+00    |
| .18325956+00         | .19521466+01           | .16617008+00           | .30432020+01           | .56402410+00    |
| .18413223+00         | .19521748+01           | .16536624+00           | .30666300+01           | .57113475+00    |
| .18500489+00         | .19522054+01           | .16456690+00           | .30906192+01           | .57839362+00    |
| .18587755+00         | .19522216+01           | .16416882+00           | .31028310+01           | .58208039+00    |
| .18675022+00         | .19522385+01           | .16377174+00           | .31151916+01           | .58580641+00    |
| .18762288+00         | .19522559+01           | .16337563+00           | .31277039+01           | .58957241+00    |
| .18849555+00         | .19522739+01           | .16298044+00           | .31403713+01           | .59337926+00    |
| .18936821+00         | .19522925+01           | .16258613+00           | .31531965+01           | .59722769+00    |
| .19024087+00         | .19523118+01           | .16219266+00           | .31661833+01           | .60111863+00    |
| .19111354+00         | .19523316+01           | .16180000+00           | .31793346+01           | .60505286+00    |
| .19198620+00         | .19523520+01           | .16140809+00           | .31926543+01           | .60903133+00    |
| .19285887+00         | .19523730+01           | .16101691+00           | .32061458+01           | .61305493+00    |
| .19373153+00         | .19523946+01           | .16062641+00           | .32198129+01           | .61712469+00    |
| .19460420+00         | .19524169+01           | .16023654+00           | .32336591+01           | .62124140+00    |
| .19547686+00         | .19524397+01           | .15984728+00           | .32476889+01           | .62540626+00    |
| .19634952+00         | .19524631+01           | .15945858+00           | .32619061+01           | .62962022+00    |
| .19722219+00         | .19524870+01           | .15907040+00           | .32763149+01           | .63388440+00    |
| .19809485+00         | .19525116+01           | .15868270+00           | .32909198+01           | .63819989+00    |
| .19896752+00         | .19525368+01           | .15829543+00           | .33057254+01           | .64256787+00    |
| .19984018+00         | .19525626+01           | .15790856+00           | .33207342+01           | .64698948+00    |
| .20071285+00         | .19525889+01           | .15752204+00           | .33359570+01           | .65146597+00    |
| .20158551+00         | .19526159+01           | .15713583+00           | .33513930+01           | .65599863+00    |
| .20245818+00         | .19526435+01           | .15674990+00           | .33670493+01           | .66058874+00    |
| .20333084+00         | .19526717+01           | .15636419+00           | .33829311+01           | .66523766+00    |
| .20420351+00         | .19527005+01           | .15597866+00           | .33990441+01           | .66994681+00    |
| .20507617+00         | .19527299+01           | .15559326+00           | .34153940+01           | .67471762+00    |
| .20594884+00         | .19527599+01           | .15520797+00           | .34319870+01           | .67955166+00    |
| .20682150+00         | .19527905+01           | .15482272+00           | .34488290+01           | .68445043+00    |
| .20769417+00         | .19528218+01           | .15443747+00           | .34659268+01           | .68941563+00    |
| .20856683+00         | .19528536+01           | .15405218+00           | .34832867+01           | .69444887+00    |

TABLE 85. (Concluded)

$$M_{\infty} = .19999983+02$$

$$\Theta_s = .17453292+00$$

| $\Theta$     | $M^*_1$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .19722219+00 | .19528861+01 | .15366680+00 | .35009160+01 | .69955198+00 |
| .19765851+00 | .19529194+01 | .15328128+00 | .35188214+01 | .70472661+00 |
| .19809484+00 | .19529534+01 | .15289557+00 | .35370106+01 | .70997475+00 |
| .19853116+00 | .19529880+01 | .15250962+00 | .35554917+01 | .71529841+00 |
| .19896749+00 | .19530232+01 | .15212338+00 | .35742728+01 | .72069962+00 |
| .19940381+00 | .19530591+01 | .15173680+00 | .35933625+01 | .72618054+00 |
| .19984014+00 | .19530957+01 | .15134982+00 | .36127690+01 | .73174325+00 |
| .20027646+00 | .19531329+01 | .15096239+00 | .36325023+01 | .73739022+00 |
| .20071279+00 | .19531708+01 | .15057445+00 | .36525715+01 | .74312375+00 |
| .20114911+00 | .19532094+01 | .15018595+00 | .36729869+01 | .74894641+00 |
| .20158543+00 | .19532486+01 | .14979682+00 | .36937585+01 | .75486072+00 |
| .20202176+00 | .19532886+01 | .14940700+00 | .37148980+01 | .76086955+00 |
| .20245808+00 | .19533293+01 | .14901643+00 | .37364162+01 | .76697565+00 |
| .20289441+00 | .19533707+01 | .14862506+00 | .37583253+01 | .77318204+00 |
| .20333073+00 | .19534128+01 | .14823280+00 | .37806380+01 | .77949189+00 |
| .20376706+00 | .19534557+01 | .14783958+00 | .38033675+01 | .78590846+00 |
| .20420338+00 | .19534993+01 | .14744535+00 | .38265271+01 | .79243509+00 |
| .20463971+00 | .19535437+01 | .14705003+00 | .38501317+01 | .79907548+00 |
| .20507603+00 | .19535888+01 | .14665353+00 | .38741966+01 | .80583342+00 |
| .20551236+00 | .19536348+01 | .14625579+00 | .38987378+01 | .81271286+00 |
| .20594868+00 | .19536816+01 | .14585670+00 | .39237719+01 | .81971796+00 |
| .20638501+00 | .19537292+01 | .14545620+00 | .39493168+01 | .82685311+00 |
| .20682134+00 | .19537773+01 | .14505498+00 | .39753138+01 | .83354422+00 |

$$.14979818+01 = \Delta S/R$$

$$.22649994+02 = P_s/P_{\infty}$$

$$.35898927+01 = \rho_s/\rho_{\infty}$$

$$.43656913+01 = T_s/T_{\infty}$$

TABLE 86. CONICAL FLOWFIELD  $\theta_s = 10.0$  DEG;  $M_\infty = 22.5$

| $\underline{u}_s$    | $\underline{M}_\infty$ | $\underline{\theta}_s$ | $\underline{\theta}_w$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .97696261+00         | .22499955+02           | .17453292+00           | .20557263+00           |                 |
| $\underline{\theta}$ | $\underline{M}_1^*$    | $\underline{\psi}_1$   | $\underline{x}$        | $\underline{r}$ |
| .17453292+00         | .19538886+01           | .17453292+00           | .28356408+01           | .50000000+00    |
| .17476925+00         | .19538890+01           | .17469766+00           | .28452041+01           | .50296637+00    |
| .17540558+00         | .19538901+01           | .17366450+00           | .28548685+01           | .50595951+00    |
| .17584192+00         | .19538919+01           | .17323339+00           | .28646356+01           | .50897980+00    |
| .17627825+00         | .19538945+01           | .17280427+00           | .28745070+01           | .51202766+00    |
| .17671458+00         | .19538977+01           | .17237708+00           | .28844846+01           | .51510356+00    |
| .17715091+00         | .19539017+01           | .17195179+00           | .28944570+01           | .51820795+00    |
| .17758724+00         | .19539064+01           | .17152832+00           | .29044765+01           | .52134136+00    |
| .17802358+00         | .19539117+01           | .17110665+00           | .29150722+01           | .52450424+00    |
| .17845991+00         | .19539177+01           | .17068670+00           | .29254929+01           | .52769713+00    |
| .17889624+00         | .19539245+01           | .17026844+00           | .29360293+01           | .53092055+00    |
| .17933257+00         | .19539318+01           | .16985181+00           | .29466834+01           | .53417501+00    |
| .17976891+00         | .19539399+01           | .16943677+00           | .29574575+01           | .53746109+00    |
| .18020524+00         | .19539486+01           | .16902326+00           | .29683538+01           | .54077934+00    |
| .18064157+00         | .19539579+01           | .16861126+00           | .29793744+01           | .54413035+00    |
| .18107790+00         | .19539679+01           | .16820069+00           | .29905218+01           | .54751472+00    |
| .18151423+00         | .19539786+01           | .16779153+00           | .30017982+01           | .55093303+00    |
| .18195057+00         | .19539898+01           | .16738373+00           | .30132063+01           | .55438596+00    |
| .18238690+00         | .19540018+01           | .16697723+00           | .30247483+01           | .55787410+00    |
| .18282323+00         | .19540143+01           | .16657201+00           | .30364269+01           | .56139813+00    |
| .18325956+00         | .19540275+01           | .16616800+00           | .30482447+01           | .56495873+00    |
| .18369589+00         | .19540413+01           | .16576518+00           | .30602047+01           | .56855662+00    |
| .18413223+00         | .19540557+01           | .16536349+00           | .30723094+01           | .57219249+00    |
| .18456856+00         | .19540707+01           | .16496290+00           | .30845620+01           | .57586713+00    |
| .18500489+00         | .19540864+01           | .16456336+00           | .30969654+01           | .57958128+00    |
| .18544122+00         | .19541026+01           | .16416482+00           | .31095223+01           | .58333566+00    |
| .18587755+00         | .19541195+01           | .16376726+00           | .31222364+01           | .58713116+00    |
| .18631389+00         | .19541369+01           | .16337061+00           | .31351106+01           | .59096858+00    |
| .18675022+00         | .19541550+01           | .16297485+00           | .31481486+01           | .59484880+00    |
| .18718655+00         | .19541737+01           | .16257993+00           | .31613534+01           | .59877264+00    |
| .18762288+00         | .19541930+01           | .16218581+00           | .31747292+01           | .60274112+00    |
| .18805921+00         | .19542129+01           | .16179244+00           | .31882791+01           | .60675506+00    |
| .18849555+00         | .19542334+01           | .16139979+00           | .32020074+01           | .61081552+00    |
| .18893188+00         | .19542544+01           | .16100781+00           | .32159176+01           | .61492344+00    |
| .18936821+00         | .19542761+01           | .16061646+00           | .32300191+01           | .61907988+00    |
| .18980454+00         | .19542984+01           | .16022569+00           | .32443009+01           | .62328586+00    |
| .19024087+00         | .19543213+01           | .15983548+00           | .32587825+01           | .62754255+00    |
| .19067721+00         | .19543448+01           | .15944576+00           | .32734632+01           | .63185101+00    |
| .19111354+00         | .19543689+01           | .15905651+00           | .32883478+01           | .63621245+00    |
| .19154987+00         | .19543936+01           | .15866768+00           | .33034410+01           | .64062809+00    |

TABLE 86. (Concluded)

$$M_{\infty} = .22499955+02$$

$$\Theta_s = .17453292+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .19198620+00 | .19544189+01 | .15827922+00 | .33187479+01 | .64509919+00 |
| .19242254+00 | .19544448+01 | .15789109+00 | .33342735+01 | .64962701+00 |
| .19285887+00 | .19544713+01 | .15750324+00 | .33500232+01 | .65421291+00 |
| .19329520+00 | .19544984+01 | .15711564+00 | .33660028+01 | .65885833+00 |
| .19373153+00 | .19545261+01 | .15672823+00 | .33822175+01 | .66356464+00 |
| .19416786+00 | .19545545+01 | .15634097+00 | .33986734+01 | .66833331+00 |
| .19460420+00 | .19545834+01 | .15595382+00 | .34153770+01 | .67316599+00 |
| .19504053+00 | .19546130+01 | .15556672+00 | .34323342+01 | .67806418+00 |
| .19547686+00 | .19546432+01 | .15517964+00 | .34495520+01 | .68302963+00 |
| .19591319+00 | .19546740+01 | .15479251+00 | .34670371+01 | .68806398+00 |
| .19634952+00 | .19547055+01 | .15440530+00 | .34847968+01 | .69316911+00 |
| .19678585+00 | .19547377+01 | .15401795+00 | .35028384+01 | .69834679+00 |
| .19722217+00 | .19547706+01 | .15363041+00 | .35211698+01 | .70359902+00 |
| .19765850+00 | .19548042+01 | .15324264+00 | .35397990+01 | .70892782+00 |
| .19809482+00 | .19548384+01 | .15285456+00 | .35587347+01 | .71433531+00 |
| .19853115+00 | .19548733+01 | .15246614+00 | .35779855+01 | .71982369+00 |
| .19896747+00 | .19549088+01 | .15207731+00 | .35975605+01 | .72539518+00 |
| .19940380+00 | .19549450+01 | .15168803+00 | .36174695+01 | .73105226+00 |
| .19984012+00 | .19549819+01 | .15129822+00 | .36377220+01 | .73679727+00 |
| .20027645+00 | .19550195+01 | .15090783+00 | .36583289+01 | .74263293+00 |
| .20071277+00 | .19550578+01 | .15051680+00 | .36793006+01 | .74856181+00 |
| .20114909+00 | .19550968+01 | .15012506+00 | .37006489+01 | .75458684+00 |
| .20158542+00 | .19551364+01 | .14973256+00 | .37223853+01 | .76071088+00 |
| .20202174+00 | .19551769+01 | .14933921+00 | .37445227+01 | .76693711+00 |
| .20245807+00 | .19552180+01 | .14894496+00 | .37670740+01 | .77326874+00 |
| .20289439+00 | .19552599+01 | .14854973+00 | .37900530+01 | .77970918+00 |
| .20333072+00 | .19553026+01 | .14815345+00 | .38134738+01 | .78626191+00 |
| .20376704+00 | .19553460+01 | .14775604+00 | .38373520+01 | .79293078+00 |
| .20420337+00 | .19553902+01 | .14735742+00 | .38617032+01 | .79971965+00 |
| .20463969+00 | .19554352+01 | .14695750+00 | .38865442+01 | .80663265+00 |
| .20507602+00 | .19554811+01 | .14655621+00 | .39118927+01 | .81367415+00 |
| .20551234+00 | .19555277+01 | .14615344+00 | .39377673+01 | .82084870+00 |
| .20594867+00 | .19555750+01 | .14574967+00 | .39641385+01 | .82818509+00 |

$$.17605700+01 = \Delta S/R$$

$$.28574622+02 = P_s/P_{\infty}$$

$$.36958925+01 = \rho_s/\rho_{\infty}$$

$$.77314543+01 = T_s/T_{\infty}$$

TABLE 87. CONICAL FLOWFIELD  $\theta_s = 10.0$  DEG;  $M_\infty = 25.0$

| $\underline{u_s}$    | $\underline{M_\infty}$ | $\underline{\theta_s}$ | $\underline{\theta_w}$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .97763803+00         | .24999962+02           | .17453292+00           | .20469853+00           |                 |
| $\underline{\theta}$ | $\underline{M_1^*}$    | $\underline{\psi_1}$   | $\underline{x}$        | $\underline{r}$ |
| .17453292+00         | .19552394+01           | .17453292+00           | .28356408+01           | .50000000+00    |
| .17496925+00         | .19552398+01           | .17497766+00           | .28453591+01           | .50299378+00    |
| .17540558+00         | .19552409+01           | .17366450+00           | .28551818+01           | .50601504+00    |
| .17584192+00         | .19552427+01           | .17323338+00           | .28651105+01           | .50906417+00    |
| .17627825+00         | .19552453+01           | .17280425+00           | .28751469+01           | .51214164+00    |
| .17671458+00         | .19552485+01           | .17237706+00           | .28852929+01           | .51524792+00    |
| .17715091+00         | .19552525+01           | .17195174+00           | .28955505+01           | .51838350+00    |
| .17758724+00         | .19552572+01           | .17152825+00           | .29059215+01           | .52154889+00    |
| .17802358+00         | .19552625+01           | .17110654+00           | .29164081+01           | .52474461+00    |
| .17845991+00         | .19552686+01           | .17068655+00           | .29270123+01           | .52797119+00    |
| .17889624+00         | .19552753+01           | .17026823+00           | .29377362+01           | .53122921+00    |
| .17933257+00         | .19552827+01           | .16985153+00           | .29485821+01           | .53451920+00    |
| .17976891+00         | .19552907+01           | .16943641+00           | .29595522+01           | .53784175+00    |
| .18020524+00         | .19552994+01           | .16902202+00           | .29706487+01           | .54119743+00    |
| .18064157+00         | .19553088+01           | .16861070+00           | .29818740+01           | .54458686+00    |
| .18107790+00         | .19553188+01           | .16820001+00           | .29932308+01           | .54801070+00    |
| .18151423+00         | .19553295+01           | .16779071+00           | .30047214+01           | .55146953+00    |
| .18195057+00         | .19553408+01           | .16738274+00           | .30163484+01           | .55496407+00    |
| .18238690+00         | .19553527+01           | .16697606+00           | .30281144+01           | .55849494+00    |
| .18282323+00         | .19553652+01           | .16657064+00           | .30400222+01           | .56206286+00    |
| .18325956+00         | .19553784+01           | .16616641+00           | .30520746+01           | .56566855+00    |
| .18369589+00         | .19553922+01           | .16576334+00           | .30642746+01           | .56931277+00    |
| .18413223+00         | .19554067+01           | .16536138+00           | .30766252+01           | .57299627+00    |
| .18456856+00         | .19554217+01           | .16496049+00           | .30891293+01           | .57671982+00    |
| .18500489+00         | .19554374+01           | .16456063+00           | .31017903+01           | .58048424+00    |
| .18544122+00         | .19554537+01           | .16416174+00           | .31146111+01           | .58429030+00    |
| .18587755+00         | .19554706+01           | .16376380+00           | .31275955+01           | .58813893+00    |
| .18631389+00         | .19554881+01           | .16336674+00           | .31407467+01           | .59203099+00    |
| .18675022+00         | .19555062+01           | .16297054+00           | .31540684+01           | .59596737+00    |
| .18718655+00         | .19555249+01           | .16257514+00           | .31675642+01           | .59994899+00    |
| .18762288+00         | .19555442+01           | .16218051+00           | .31812382+01           | .60397689+00    |
| .18805921+00         | .19555642+01           | .16178660+00           | .31950938+01           | .60805196+00    |
| .18849555+00         | .19555847+01           | .16139337+00           | .32091357+01           | .61217532+00    |
| .18893188+00         | .19556058+01           | .16100078+00           | .32233675+01           | .61634795+00    |
| .18936821+00         | .19556276+01           | .16060877+00           | .32377940+01           | .62057100+00    |
| .18980454+00         | .19556499+01           | .16021731+00           | .32524195+01           | .62484558+00    |
| .19024087+00         | .19556729+01           | .15982635+00           | .32672487+01           | .62917287+00    |
| .19067721+00         | .19556964+01           | .15943586+00           | .32822862+01           | .63355405+00    |
| .19111354+00         | .19557206+01           | .15904577+00           | .32975373+01           | .63799039+00    |
| .19154987+00         | .19557454+01           | .15865606+00           | .33130070+01           | .64248320+00    |

TABLE 87. (Concluded)

$$M_{\infty} = .24999962+02$$

$$\Theta_s = .17453292+00$$

| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .19198623+00 | .19557707+01 | .15826667+00 | .33287008+01 | .64703383+00 |
| .19242254+00 | .19557967+01 | .15787756+00 | .33446238+01 | .65164359+00 |
| .19285887+00 | .19558233+01 | .15748868+00 | .33607822+01 | .65631398+00 |
| .19329520+00 | .19558506+01 | .15709999+00 | .33771819+01 | .66104651+00 |
| .19373153+00 | .19558784+01 | .15671144+00 | .33938288+01 | .66584268+00 |
| .19416786+00 | .19559069+01 | .15632298+00 | .34107295+01 | .67070408+00 |
| .19460420+00 | .19559360+01 | .15593456+00 | .34278906+01 | .67563241+00 |
| .19504053+00 | .19559657+01 | .15554614+00 | .34453189+01 | .68062934+00 |
| .19547686+00 | .19559960+01 | .15515766+00 | .34630218+01 | .68569672+00 |
| .19591319+00 | .19560270+01 | .15476907+00 | .34810066+01 | .69083636+00 |
| .19634952+00 | .19560588+01 | .15438033+00 | .34992810+01 | .69605017+00 |
| .19678584+00 | .19560913+01 | .15399137+00 | .35178534+01 | .70134024+00 |
| .19722217+00 | .19561244+01 | .15360214+00 | .35367322+01 | .70670868+00 |
| .19765849+00 | .19561581+01 | .15321259+00 | .35559262+01 | .71215764+00 |
| .19809482+00 | .19561925+01 | .15282267+00 | .35754445+01 | .71768940+00 |
| .19853114+00 | .19562276+01 | .15243231+00 | .35952967+01 | .72330636+00 |
| .19896746+00 | .19562634+01 | .15204145+00 | .36154927+01 | .72901093+00 |
| .19940379+00 | .19562999+01 | .15165004+00 | .36360432+01 | .73480577+00 |
| .19984011+00 | .19563370+01 | .15125801+00 | .36569588+01 | .74069352+00 |
| .20027644+00 | .19563749+01 | .15086530+00 | .36782512+01 | .74667708+00 |
| .20071276+00 | .19564135+01 | .15047184+00 | .36999322+01 | .75275931+00 |
| .20114909+00 | .19564528+01 | .15007756+00 | .37220144+01 | .75894336+00 |
| .20158541+00 | .19564928+01 | .14968240+00 | .37445109+01 | .76523244+00 |
| .20202174+00 | .19565336+01 | .14928627+00 | .37674356+01 | .77163000+00 |
| .20245806+00 | .19565751+01 | .14888911+00 | .37908028+01 | .77813953+00 |
| .20289439+00 | .19566174+01 | .14849084+00 | .38146277+01 | .78476477+00 |
| .20333071+00 | .19566605+01 | .14809137+00 | .38389263+01 | .79150967+00 |
| .20376704+00 | .19567043+01 | .14769063+00 | .38637154+01 | .79837834+00 |
| .20420336+00 | .19567490+01 | .14728852+00 | .38889012+01 | .80537518+00 |
| .20463968+00 | .19567945+01 | .14688496+00 | .39148372+01 | .81250469+00 |
| .20469853+00 | .19568007+01 | .14683042+00 | .39183614+01 | .81347662+00 |

$$.20089907+01 = \Delta S/R$$

$$.34972155+02 = P_s/P_{\infty}$$

$$.37775222+01 = \rho_s/\rho_{\infty}$$

$$.92579616+01 = T_s/T_{\infty}$$



TABLE 88. CONICAL FLOWFIELD  $\theta_s = 10.0$  DEG;  $M_\infty = 27.5$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .97813921+00 | .27499968+02 | .17453292+00 | .20404875+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .17453292+00 | .19562417+01 | .17453292+00 | .28356408+01 | .50000000+00 |
| .17496925+00 | .19562421+01 | .17497746+00 | .28454787+01 | .50301491+00 |
| .17540558+00 | .19562432+01 | .17366450+00 | .28554235+01 | .50605787+00 |
| .17584192+00 | .19562451+01 | .17323338+00 | .28654769+01 | .50912929+00 |
| .17627825+00 | .19562476+01 | .17280424+00 | .28756408+01 | .51222961+00 |
| .17671458+00 | .19562509+01 | .17237704+00 | .28859170+01 | .51535936+00 |
| .17715091+00 | .19562549+01 | .17195171+00 | .28963076+01 | .51851903+00 |
| .17758724+00 | .19562595+01 | .17152820+00 | .29068145+01 | .52170916+00 |
| .17802358+00 | .19562649+01 | .17110646+00 | .29174399+01 | .52493025+00 |
| .17845991+00 | .19562710+01 | .17068643+00 | .29281860+01 | .52818292+00 |
| .17889624+00 | .19562777+01 | .17026807+00 | .29390551+01 | .53146770+00 |
| .17933257+00 | .19562851+01 | .16985132+00 | .29500492+01 | .53478516+00 |
| .17976891+00 | .19562931+01 | .16943614+00 | .29611709+01 | .53813593+00 |
| .18020524+00 | .19563019+01 | .16902247+00 | .29724225+01 | .54152060+00 |
| .18064157+00 | .19563112+01 | .16861026+00 | .29838065+01 | .54493979+00 |
| .18107790+00 | .19563212+01 | .16819948+00 | .29953255+01 | .54839420+00 |
| .18151423+00 | .19563319+01 | .16779006+00 | .30069820+01 | .55188443+00 |
| .18195057+00 | .19563432+01 | .16738197+00 | .30187789+01 | .55541125+00 |
| .18238690+00 | .19563552+01 | .16697515+00 | .30307187+01 | .55897526+00 |
| .18282323+00 | .19563677+01 | .16656956+00 | .30428045+01 | .56257727+00 |
| .18325956+00 | .19563809+01 | .16616516+00 | .30550390+01 | .56621797+00 |
| .18369589+00 | .19563947+01 | .16576190+00 | .30674255+01 | .56989817+00 |
| .18413223+00 | .19564092+01 | .16535973+00 | .30799669+01 | .57361864+00 |
| .18456856+00 | .19564243+01 | .16495860+00 | .30926666+01 | .57738020+00 |
| .18500489+00 | .19564399+01 | .16455849+00 | .31055278+01 | .58118370+00 |
| .18544122+00 | .19564562+01 | .16415933+00 | .31185539+01 | .58502995+00 |
| .18587755+00 | .19564732+01 | .16376108+00 | .31317486+01 | .58891991+00 |
| .18631389+00 | .19564907+01 | .16336371+00 | .31451154+01 | .59285448+00 |
| .18675022+00 | .19565088+01 | .16296716+00 | .31586581+01 | .59683460+00 |
| .18718655+00 | .19565276+01 | .16257139+00 | .31723805+01 | .60086121+00 |
| .18762288+00 | .19565469+01 | .16217637+00 | .31862868+01 | .60493541+00 |
| .18805921+00 | .19565669+01 | .16178203+00 | .32003808+01 | .60905812+00 |
| .18849555+00 | .19565875+01 | .16138834+00 | .32146672+01 | .61323052+00 |
| .18893188+00 | .19566087+01 | .16099526+00 | .32291502+01 | .61745366+00 |
| .18936821+00 | .19566304+01 | .16060274+00 | .32438343+01 | .62172873+00 |
| .18980454+00 | .19566528+01 | .16021073+00 | .32587243+01 | .62605604+00 |
| .19024087+00 | .19566758+01 | .15981919+00 | .32738252+01 | .63043931+00 |
| .19067721+00 | .19566994+01 | .15942808+00 | .32891419+01 | .63487734+00 |
| .19111354+00 | .19567237+01 | .15903734+00 | .33046797+01 | .63937226+00 |
| .19154987+00 | .19567485+01 | .15864694+00 | .33204442+01 | .64392547+00 |



TABLE 88. (Concluded)

| $M_{\infty} = .27499968+02$ |              | $\Theta_s = .17453292+00$ |              |              |
|-----------------------------|--------------|---------------------------|--------------|--------------|
| $\Theta$                    | $M_1^*$      | $\psi_1$                  | $x$          | $r$          |
| .19198620+00                | .19567740+01 | .15825682+00              | .33364408+01 | .64853833+00 |
| .19242254+00                | .19568000+01 | .15786694+00              | .33526755+01 | .65321232+00 |
| .19285887+00                | .19568267+01 | .15747725+00              | .33691543+01 | .65794895+00 |
| .19329520+00                | .19568540+01 | .15708770+00              | .33858836+01 | .66274979+00 |
| .19373153+00                | .19568819+01 | .15669825+00              | .34026700+01 | .66761648+00 |
| .19416786+00                | .19569105+01 | .15630884+00              | .34201199+01 | .67255067+00 |
| .19460420+00                | .19569397+01 | .15591943+00              | .34376408+01 | .67755415+00 |
| .19504053+00                | .19569695+01 | .15552996+00              | .34554396+01 | .68262870+00 |
| .19547686+00                | .19570000+01 | .15514037+00              | .34735245+01 | .68777630+00 |
| .19591318+00                | .19570313+01 | .15475063+00              | .34919026+01 | .69299874+00 |
| .19634951+00                | .19570632+01 | .15436067+00              | .35105830+01 | .69829825+00 |
| .19678583+00                | .19570958+01 | .15397044+00              | .35295740+01 | .70367691+00 |
| .19722216+00                | .19571290+01 | .15357988+00              | .35488849+01 | .70913699+00 |
| .19765848+00                | .19571630+01 | .15318894+00              | .35685247+01 | .71468075+00 |
| .19809481+00                | .19571975+01 | .15279754+00              | .35885036+01 | .72031069+00 |
| .19853113+00                | .19572328+01 | .15240565+00              | .36088316+01 | .72602929+00 |
| .19896746+00                | .19572688+01 | .15201318+00              | .36295193+01 | .73183917+00 |
| .19940378+00                | .19573054+01 | .15162009+00              | .36505781+01 | .73774309+00 |
| .19984011+00                | .19573428+01 | .15122630+00              | .36720197+01 | .74374399+00 |
| .20027643+00                | .19573809+01 | .15083174+00              | .36938562+01 | .74984483+00 |
| .20071276+00                | .19574197+01 | .15043634+00              | .37161008+01 | .75604883+00 |
| .20114908+00                | .19574592+01 | .15004004+00              | .37387667+01 | .76235924+00 |
| .20158540+00                | .19574995+01 | .14964276+00              | .37618660+01 | .76877954+00 |
| .20202173+00                | .19575406+01 | .14924441+00              | .37854199+01 | .77531344+00 |
| .20245805+00                | .19575824+01 | .14884493+00              | .38094378+01 | .78196471+00 |
| .20289438+00                | .19576250+01 | .14844423+00              | .38339383+01 | .78873742+00 |
| .20333070+00                | .19576684+01 | .14804222+00              | .38589385+01 | .79563576+00 |
| .20376703+00                | .19577127+01 | .14763882+00              | .38844569+01 | .80266423+00 |
| .20420335+00                | .19577577+01 | .14723756+00              | .39012180+01 | .80972737+00 |

$$.22432829+01 = \Delta S/R$$

$$.42042945+02 = P_s/P_{\infty}$$

$$.38413737+01 = \rho_s/\rho_{\infty}$$

$$.10944768+02 = T_s/T_{\infty}$$

TABLE 89. CONICAL FLOWFIELD  $\theta_s = 10.0$  DEG;  $M_\infty = 30.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .97852127+00 | .29999893+02 | .17453292+00 | .20355278+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .17453292+00 | .19570058+01 | .17453292+00 | .28356408+01 | .50000000+00 |
| .17496925+00 | .19570062+01 | .17499766+00 | .28455726+01 | .50303152+00 |
| .17540558+00 | .19570073+01 | .17366430+00 | .28556134+01 | .50609152+00 |
| .17584192+00 | .19570092+01 | .17323337+00 | .28657648+01 | .50918043+00 |
| .17627825+00 | .19570117+01 | .17280423+00 | .28760288+01 | .51229873+00 |
| .17671458+00 | .19570150+01 | .17237702+00 | .28864073+01 | .51544692+00 |
| .17715091+00 | .19570190+01 | .17195168+00 | .28969024+01 | .51862553+00 |
| .17758724+00 | .19570237+01 | .17152815+00 | .29075162+01 | .52183510+00 |
| .17802358+00 | .19570290+01 | .17110639+00 | .29182509+01 | .52507617+00 |
| .17845991+00 | .19570351+01 | .17068634+00 | .29291086+01 | .52834933+00 |
| .17889624+00 | .19570418+01 | .17026794+00 | .29400918+01 | .53165518+00 |
| .17933257+00 | .19570492+01 | .16985115+00 | .29512028+01 | .53499427+00 |
| .17976891+00 | .19570573+01 | .16943592+00 | .29624439+01 | .53836726+00 |
| .18020524+00 | .19570660+01 | .16902219+00 | .29738176+01 | .54177476+00 |
| .18064157+00 | .19570754+01 | .16860992+00 | .29853265+01 | .54521739+00 |
| .18107790+00 | .19570854+01 | .16819905+00 | .29969734+01 | .54869590+00 |
| .18151423+00 | .19570961+01 | .16778954+00 | .30087608+01 | .55221090+00 |
| .18195057+00 | .19571074+01 | .16738135+00 | .30206915+01 | .55576314+00 |
| .18238690+00 | .19571193+01 | .16697442+00 | .30327684+01 | .55935331+00 |
| .18282323+00 | .19571319+01 | .16656871+00 | .30449945+01 | .56298218+00 |
| .18325956+00 | .19571451+01 | .16616417+00 | .30573727+01 | .56665049+00 |
| .18369589+00 | .19571589+01 | .16576075+00 | .30699064+01 | .57035910+00 |
| .18413223+00 | .19571734+01 | .16535841+00 | .30825986+01 | .57410876+00 |
| .18456856+00 | .19571885+01 | .16495710+00 | .30954528+01 | .57790036+00 |
| .18500489+00 | .19572042+01 | .16455678+00 | .31084723+01 | .58173475+00 |
| .18544122+00 | .19572205+01 | .16415741+00 | .31216607+01 | .58561277+00 |
| .18587755+00 | .19572375+01 | .16375893+00 | .31350217+01 | .58953542+00 |
| .18631389+00 | .19572550+01 | .16336130+00 | .31485589+01 | .59350358+00 |
| .18675022+00 | .19572732+01 | .16296447+00 | .31622765+01 | .59751830+00 |
| .18718655+00 | .19572919+01 | .16256841+00 | .31761783+01 | .60158053+00 |
| .18762288+00 | .19573113+01 | .16217307+00 | .31902686+01 | .60569138+00 |
| .18805921+00 | .19573313+01 | .16177839+00 | .32045515+01 | .60985182+00 |
| .18849555+00 | .19573519+01 | .16138435+00 | .32190318+01 | .61406311+00 |
| .18893188+00 | .19573731+01 | .16099088+00 | .32337136+01 | .61832625+00 |
| .18936821+00 | .19573950+01 | .16059794+00 | .32486022+01 | .62264255+00 |
| .18980454+00 | .19574174+01 | .16020550+00 | .32637019+01 | .62701313+00 |
| .19024087+00 | .19574404+01 | .15981350+00 | .32790185+01 | .63143939+00 |
| .19067721+00 | .19574641+01 | .15942189+00 | .32945567+01 | .63592253+00 |
| .19111354+00 | .19574884+01 | .15903063+00 | .33103223+01 | .64046397+00 |
| .19154987+00 | .19575132+01 | .15863968+00 | .33263210+01 | .64506514+00 |

TABLE 89. (Concluded)

| $M_{\infty} = .29999893 + j2$ |              | $\Theta_s = .17453292 + j0$ |               |               |
|-------------------------------|--------------|-----------------------------|---------------|---------------|
| $\Theta$                      | $M_1^*$      | $\psi_1$                    | $x$           | $r$           |
| .19198620+j00                 | .19575388+j1 | .15824898+j00               | .33425585+j01 | .64972749+j00 |
| .19242254+j00                 | .19575649+j1 | .15785848+j00               | .33590409+j01 | .65445252+j00 |
| .19285887+j00                 | .19575916+j1 | .15746815+j00               | .33757748+j01 | .65924183+j00 |
| .19329520+j00                 | .19576190+j1 | .15707792+j00               | .33927666+j01 | .66409706+j00 |
| .19373153+j00                 | .19576470+j1 | .15668774+j00               | .34100231+j01 | .66901988+j00 |
| .19416786+j00                 | .19576756+j1 | .15629758+j00               | .34275514+j01 | .67401203+j00 |
| .19460420+j00                 | .19577049+j1 | .15590736+j00               | .34453589+j01 | .67907538+j00 |
| .19504053+j00                 | .19577348+j1 | .15551715+j00               | .34634532+j01 | .68421180+j00 |
| .19547685+j00                 | .19577655+j1 | .15512659+j00               | .34818424+j01 | .68942327+j00 |
| .19591318+j00                 | .19577969+j1 | .15473593+j00               | .35005348+j01 | .69471185+j00 |
| .19634950+j00                 | .19578289+j1 | .15434500+j00               | .35195394+j01 | .70007976+j00 |
| .19678583+j00                 | .19578616+j1 | .15395375+j00               | .35388652+j01 | .70552923+j00 |
| .19722215+j00                 | .19578950+j1 | .15356212+j00               | .35585216+j01 | .71106256+j00 |
| .19765848+j00                 | .19579291+j1 | .15317005+j00               | .35785185+j01 | .71668222+j00 |
| .19809480+j00                 | .19579638+j1 | .15277749+j00               | .35988662+j01 | .72239073+j00 |
| .19853112+j00                 | .19579992+j1 | .15238436+j00               | .36195754+j01 | .72819072+j00 |
| .19896745+j00                 | .19580353+j1 | .15199060+j00               | .36406574+j01 | .73408496+j00 |
| .19940377+j00                 | .19580721+j1 | .15159615+j00               | .36621242+j01 | .74007641+j00 |
| .19984010+j00                 | .19581096+j1 | .15120094+j00               | .36839800+j01 | .74616806+j00 |
| .20027642+j00                 | .19581479+j1 | .15080490+j00               | .37062618+j01 | .75236310+j00 |
| .20071275+j00                 | .19581869+j1 | .15040795+j00               | .37289594+j01 | .75866490+j00 |
| .20114907+j00                 | .19582267+j1 | .15001002+j00               | .37520952+j01 | .76507697+j00 |
| .20158540+j00                 | .19582672+j1 | .14961103+j00               | .37756838+j01 | .77160293+j00 |
| .20202172+j00                 | .19583085+j1 | .14921090+j00               | .37997411+j01 | .77824663+j00 |
| .20245805+j00                 | .19583505+j1 | .14880955+j00               | .38242839+j01 | .78501216+j00 |
| .20289437+j00                 | .19583934+j1 | .14840689+j00               | .38493296+j01 | .79190377+j00 |
| .20333070+j00                 | .19584371+j1 | .14800283+j00               | .38748967+j01 | .79892600+j00 |
| .20355278+j00                 | .19584816+j1 | .14779659+j00               | .38881167+j01 | .80255195+j00 |

$$.24640888+j01 = \Delta S/R$$

$$.49786623+j02 = P_s/P_{\infty}$$

$$.38920494+j01 = \rho_s/\rho_{\infty}$$

$$.12791879+j02 = T_s/T_{\infty}$$

TABLE 90. CONICAL FLOWFIELD  $\theta_s = 12.5$  DEG;  $M_\infty = 1.1837936$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .50000938+00 | .11837936+01 | .21816615+00 | .10579674+01 |              |
| $\theta$     | $M^*_1$      | $\psi_1$     | $x$          | $r$          |
| .21816615+00 | .10000000+01 | .21816615+00 | .22553542+01 | .50000000+00 |
| .24347341+00 | .10005360+01 | .19544342+00 | .22444730+01 | .55752994+00 |
| .26878067+00 | .10018292+01 | .17690581+00 | .22367189+01 | .61609493+00 |
| .29406793+00 | .10035693+01 | .16146386+00 | .22316253+01 | .67589284+00 |
| .31939519+00 | .10055767+01 | .14837711+00 | .22288768+01 | .73713035+00 |
| .34470245+00 | .10077440+01 | .13712410+00 | .22282577+01 | .80002607+00 |
| .37000971+00 | .10100052+01 | .12732657+00 | .22296313+01 | .86481677+00 |
| .39269898+00 | .10120784+01 | .11954775+00 | .22324859+01 | .92472566+00 |
| .41538825+00 | .10141755+01 | .11255645+00 | .22368430+01 | .98656502+00 |
| .43807752+00 | .10162843+01 | .10622916+00 | .22426988+01 | .10505565+01 |
| .46076678+00 | .10183975+01 | .10046667+00 | .22500728+01 | .11169454+01 |
| .48345605+00 | .10205106+01 | .95188271-01 | .22590075+01 | .11860050+01 |
| .50614527+00 | .10226214+01 | .90327419-01 | .22695676+01 | .12580412+01 |
| .52621637+00 | .10244864+01 | .86331092-01 | .22803347+01 | .13245226+01 |
| .54628748+00 | .10263497+01 | .82585953-01 | .22925217+01 | .13938732+01 |
| .56635858+00 | .10282123+01 | .79064213-01 | .23062242+01 | .14663965+01 |
| .58642969+00 | .10300756+01 | .75741693-01 | .23215585+01 | .15424366+01 |
| .60650079+00 | .10319414+01 | .72597407-01 | .23386635+01 | .16223846+01 |
| .62657189+00 | .10338121+01 | .69612615-01 | .23577047+01 | .17066888+01 |
| .64402503+00 | .10354447+01 | .67133978-01 | .23759881+01 | .17839369+01 |
| .66147816+00 | .10370847+01 | .64753860-01 | .23960366+01 | .18652573+01 |
| .67893130+00 | .10387341+01 | .62463365-01 | .24180285+01 | .19510959+01 |
| .69638443+00 | .10403954+01 | .60254440-01 | .24421713+01 | .20419641+01 |
| .71383756+00 | .10420709+01 | .58119617-01 | .24687100+01 | .21384546+01 |
| .73129070+00 | .10437634+01 | .56052007-01 | .24979341+01 | .22412579+01 |
| .74612586+00 | .10452178+01 | .54342523-01 | .25251407+01 | .23342048+01 |
| .76096103+00 | .10466867+01 | .52673101-01 | .25547835+01 | .24328751+01 |
| .77579619+00 | .10481784+01 | .51040016-01 | .25871540+01 | .25379414+01 |
| .79063135+00 | .10496895+01 | .49439877-01 | .26225951+01 | .26501888+01 |
| .80546652+00 | .10512248+01 | .47869124-01 | .26615147+01 | .27705417+01 |
| .82030168+00 | .10527875+01 | .46324283-01 | .27043998+01 | .29000959+01 |
| .83251888+00 | .10540975+01 | .45069076-01 | .27431059+01 | .30146148+01 |
| .84473607+00 | .10554307+01 | .43827102-01 | .27852899+01 | .31371268+01 |
| .85695326+00 | .10567898+01 | .42596310-01 | .28314162+01 | .32686538+01 |
| .86917046+00 | .10581775+01 | .41374549-01 | .28820397+01 | .34104091+01 |
| .88138765+00 | .10595971+01 | .40159494-01 | .29378292+01 | .35638455+01 |
| .89360484+00 | .10610526+01 | .38948722-01 | .29996003+01 | .37307218+01 |
| .90320407+00 | .10622240+01 | .37998646-01 | .30529754+01 | .38726504+01 |
| .91280329+00 | .10634227+01 | .37048087-01 | .31112483+01 | .40254524+01 |
| .92240252+00 | .10646515+01 | .36095455-01 | .31751275+01 | .41906301+01 |

TABLE 90. (Concluded)

$$M_{\infty} = .11837936+01$$

$$\Theta_s = .21816615+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .93200174+00 | .10659136+01 | .35138965-01 | .32454718+01 | .43699942+01 |
| .94160096+00 | .10672128+01 | .34176573-01 | .33233337+01 | .45657521+01 |
| .95120019+00 | .10685537+01 | .33205941-01 | .34100198+01 | .47806283+01 |
| .95818144+00 | .10695581+01 | .32493308-01 | .34795287+01 | .49508231+01 |
| .96516269+00 | .10705898+01 | .31773642-01 | .35553426+01 | .51345187+01 |
| .97214395+00 | .10716515+01 | .31045526-01 | .36384014+01 | .53336461+01 |
| .97912520+00 | .10727466+01 | .30307323-01 | .37298515+01 | .55505505+01 |
| .98610646+00 | .10738790+01 | .29557183-01 | .38311112+01 | .57881200+01 |
| .99308771+00 | .10750533+01 | .28792739-01 | .39439577+01 | .60499576+01 |
| .99745099+00 | .10758110+01 | .28306499-01 | .40213526+01 | .62227912+01 |
| .10018142+01 | .10765890+01 | .27812779-01 | .41048236+01 | .64184667+01 |
| .10061775+01 | .10773890+01 | .27310640-01 | .41951759+01 | .66232370+01 |
| .10105407+01 | .10782133+01 | .26799053-01 | .42933754+01 | .68441511+01 |
| .10149039+01 | .10790644+01 | .26276797-01 | .44005900+01 | .70835345+01 |
| .10192671+01 | .10799454+01 | .25742367-01 | .45182513+01 | .73442270+01 |
| .10236295+01 | .10808596+01 | .25194243-01 | .46481112+01 | .76296876+01 |
| .10279918+01 | .10818118+01 | .24630070-01 | .47924292+01 | .79443727+01 |
| .10323541+01 | .10828071+01 | .24047121-01 | .49540865+01 | .82939390+01 |
| .10367164+01 | .10838527+01 | .23442075-01 | .51368632+01 | .86857800+01 |
| .10410787+01 | .10849572+01 | .22810563-01 | .53458521+01 | .91298170+01 |
| .10454411+01 | .10861324+01 | .22146806-01 | .55881336+01 | .96397882+01 |
| .10498034+01 | .10873945+01 | .21442816-01 | .58739547+01 | .10235492+02 |
| .10541657+01 | .10887670+01 | .20686999-01 | .62189247+01 | .10946951+02 |
| .10579674+01 | .10900807+01 | .19972250-01 | .65873002+01 | .11698721+02 |

$$.36496669-04 = \Delta S/R$$

$$.12700000+01 = P_s/P_{\infty}$$

$$.11541830+01 = \rho_s/\rho_{\infty}$$

$$.11003455+01 = T_s/T_{\infty}$$



TABLE 91. CONICAL FLOWFIELD  $\theta_s = 12.5$  DEG;  $M_\infty = 1.5$

| $\underline{u_s}$    | $\underline{M_\infty}$ | $\underline{\theta_s}$ | $\underline{\theta_w}$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .59855613+00         | .14999977+01           | .21816615+00           | .76699745+00           |                 |
| $\underline{\theta}$ | $\underline{M_1^*}$    | $\underline{\psi_1}$   | $\underline{x}$        | $\underline{r}$ |
| .21816615+00         | .11970898+01           | .21816615+00           | .22553542+01           | .50000000+00    |
| .23387410+00         | .11973539+01           | .20349238+00           | .22773503+01           | .54254133+00    |
| .24958206+00         | .11980412+01           | .19061422+00           | .23006882+01           | .58648898+00    |
| .26529001+00         | .11990335+01           | .17919943+00           | .23260420+01           | .63197154+00    |
| .28099797+00         | .12002487+01           | .16899373+00           | .23528998+01           | .67912951+00    |
| .29670592+00         | .12016290+01           | .15979877+00           | .23815655+01           | .72811763+00    |
| .31241388+00         | .12031330+01           | .15145732+00           | .24121619+01           | .77910689+00    |
| .32812183+00         | .12047305+01           | .14384302+00           | .24448285+01           | .83228733+00    |
| .34208446+00         | .12062114+01           | .13760157+00           | .24757343+01           | .88156912+00    |
| .35604709+00         | .12077374+01           | .13179305+00           | .25085345+01           | .93291536+00    |
| .37000971+00         | .12093000+01           | .12636648+00           | .25433769+01           | .98651063+00    |
| .38397334+00         | .12108928+01           | .12127831+00           | .25804295+01           | .10425609+01    |
| .39793497+00         | .12125111+01           | .11649102+00           | .26198834+01           | .11012972+01    |
| .41189759+00         | .12141512+01           | .11197202+00           | .26619562+01           | .11629797+01    |
| .42586022+00         | .12158111+01           | .10769290+00           | .27068969+01           | .12279025+01    |
| .43807752+00         | .12172785+01           | .10412582+00           | .27487960+01           | .12876297+01    |
| .45029482+00         | .12187593+01           | .10070832+00           | .27933268+01           | .13503465+01    |
| .46251211+00         | .12202535+01           | .97427007+00           | .28407375+01           | .14163390+01    |
| .47472941+00         | .12217612+01           | .94269607+00           | .28913108+01           | .14859314+01    |
| .48694671+00         | .12232830+01           | .91224942+00           | .29453700+01           | .15594925+01    |
| .49916401+00         | .12248198+01           | .88282779+00           | .30032871+01           | .16374447+01    |
| .51138121+00         | .12263726+01           | .85433498+00           | .30654916+01           | .17202726+01    |
| .52185309+00         | .12277176+01           | .83058586+00           | .31225993+01           | .17955727+01    |
| .53232497+00         | .12290765+01           | .80740198+00           | .31835876+01           | .18752744+01    |
| .54279685+00         | .12304507+01           | .78473285+00           | .32488748+01           | .19598442+01    |
| .55326873+00         | .12318416+01           | .76253086+00           | .33189441+01           | .20498186+01    |
| .56374061+00         | .12332509+01           | .74074297+00           | .33943576+01           | .21458203+01    |
| .57421249+00         | .12346805+01           | .71933836+00           | .34757737+01           | .22485747+01    |
| .58468437+00         | .12361326+01           | .69825605+00           | .35639676+01           | .23589339+01    |
| .59534109+00         | .12373616+01           | .68090476+00           | .36432994+01           | .24574310+01    |
| .60213751+00         | .12386097+01           | .66372119+00           | .37286016+01           | .25625909+01    |
| .61084407+00         | .12398787+01           | .64667799+00           | .38206089+01           | .26752125+01    |
| .61959064+00         | .12411707+01           | .62974602+00           | .39201854+01           | .27962336+01    |
| .62831721+00         | .12424881+01           | .61289534+00           | .40283590+01           | .29267659+01    |
| .63709377+00         | .12438337+01           | .59609324+00           | .41463606+01           | .30661364+01    |
| .64577034+00         | .12452107+01           | .57930365+00           | .42756785+01           | .32219449+01    |
| .65275159+00         | .12463374+01           | .56585558+00           | .43884909+01           | .33552439+01    |
| .65973285+00         | .12474888+01           | .55236936+00           | .45108299+01           | .34989466+01    |
| .66671410+00         | .12486674+01           | .53882048+00           | .46440426+01           | .36544885+01    |
| .67369536+00         | .12498762+01           | .52518152+00           | .47897567+01           | .38235989+01    |

TABLE 91. (Concluded)

| $M_{\infty} = +14902777+01$ |                     |                      | $\Theta_g = +21816615+00$ |                 |
|-----------------------------|---------------------|----------------------|---------------------------|-----------------|
| $\underline{Q}$             | $\underline{M}_1^*$ | $\underline{\psi}_1$ | $\underline{x}$           | $\underline{r}$ |
| .68067661+00                | .12511167+01        | .51142200-01         | .49499809+01              | .40083645+01    |
| .68765786+00                | .12523968+01        | .497760566+01        | .51271141+01              | .42114429+01    |
| .69463912+00                | .12537216+01        | .48339128+01         | .53292993+01              | .44360214+01    |
| .69987806+00                | .12547450+01        | .47264869+01         | .54876567+01              | .46210192+01    |
| .70511100+00                | .12557967+01        | .46173587+01         | .56665460+01              | .48225880+01    |
| .71034694+00                | .12568861+01        | .45063294+01         | .58635060+01              | .50433896+01    |
| .71558210+00                | .12580114+01        | .43930262+01         | .60816675+01              | .52866993+01    |
| .72081688+00                | .12591798+01        | .42770386+01         | .63251247+01              | .55567119+01    |
| .72605166+00                | .12603972+01        | .41588654+01         | .65990270+01              | .58588277+01    |
| .73128644+00                | .12616719+01        | .40348818+01         | .69102439+01              | .62001258+01    |
| .73477629+00                | .12629582+01        | .39103105+01         | .71428916+01              | .64540027+01    |
| .73826614+00                | .12634779+01        | .38634248+01         | .73997411+01              | .67331362+01    |
| .74175599+00                | .12644356+01        | .37738159+01         | .76653246+01              | .70421761+01    |
| .74524564+00                | .12654368+01        | .36810309+01         | .80054916+01              | .73871105+01    |
| .74873570+00                | .12664888+01        | .35849559+01         | .83679664+01              | .77758276+01    |
| .75222555+00                | .12676007+01        | .34834668+01         | .87832351+01              | .82190168+01    |
| .75571540+00                | .12687846+01        | .33769468+01         | .92660038+01              | .87316273+01    |
| .75746033+00                | .12694091+01        | .33212170+01         | .95390513+01              | .90204052+01    |
| .75920525+00                | .12700583+01        | .32635617+01         | .98377950+01              | .93354763+01    |
| .76095018+00                | .12707360+01        | .32036766+01         | .10166789+02              | .96814382+01    |
| .76269510+00                | .12714464+01        | .31412675+01         | .10531860+02              | .10064186+02    |
| .76444003+00                | .12721946+01        | .30758247+01         | .10940677+02              | .10491939+02    |
| .76618496+00                | .12729863+01        | .30068368+01         | .11403565+02              | .10973594+02    |
| .76699745+00                | .12733757+01        | .29773289+01         | .11641424+02              | .11220697+02    |

$$.78571960-04 = \Delta S/R$$

$$.13364749+01 = P_g/P_{\infty}$$

$$.11500374+01 = \rho_g/\rho_{\infty}$$

$$.11230510+01 = T_g/T_{\infty}$$



TABLE 92. CONICAL FLOWFIELD  $\theta_s = 12.5 \text{ DEG}$ ;  $M_\infty = 2.0$

| $\underline{u_s}$    | $\underline{M_\infty}$ | $\underline{\theta_s}$ | $\underline{\theta_w}$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .70375786+00         | .19999933+01           | .21816615+00           | .57114084+00           |                 |
| $\underline{\theta}$ | $\underline{M_1^*}$    | $\underline{\psi_1}$   | $\underline{x}$        | $\underline{r}$ |
| .21816615+00         | .14074893+01           | .21816615+00           | .22553542+01           | .50000000+00    |
| .22863812+00         | .14076325+01           | .20816317+00           | .22838276+01           | .53146330+00    |
| .23911009+00         | .14080223+01           | .19900597+00           | .23139296+01           | .56407516+00    |
| .24958206+00         | .14086105+01           | .19057603+00           | .23457635+01           | .59792755+00    |
| .26005403+00         | .14093600+01           | .18277624+00           | .23794464+01           | .63312165+00    |
| .27052600+00         | .14102422+01           | .17552605+00           | .24151116+01           | .66976961+00    |
| .28012531+00         | .14111483+01           | .16930501+00           | .24496730+01           | .70474642+00    |
| .28972461+00         | .14121334+01           | .16344466+00           | .24861559+01           | .74115513+00    |
| .29932392+00         | .14131867+01           | .15790872+00           | .25247063+01           | .77911332+00    |
| .30892322+00         | .14142993+01           | .15265784+00           | .25654876+01           | .81875136+00    |
| .31852253+00         | .14154651+01           | .14766879+00           | .26086846+01           | .86021500+00    |
| .32724917+00         | .14166637+01           | .14333699+00           | .26502258+01           | .89963023+00    |
| .33597581+00         | .14176985+01           | .13918128+00           | .26941116+01           | .94082567+00    |
| .34470245+00         | .14188657+01           | .13518602+00           | .27405398+01           | .98395408+00    |
| .35342909+00         | .14200634+01           | .13133711+00           | .27897339+01           | .10291869+01    |
| .36215574+00         | .14212900+01           | .12762149+00           | .28419462+01           | .10767168+01    |
| .37000971+00         | .14224177+01           | .12438168+00           | .28917537+01           | .11216370+01    |
| .37786369+00         | .14235675+01           | .12123223+00           | .29444740+01           | .11687728+01    |
| .38571767+00         | .14247392+01           | .11816563+00           | .30003740+01           | .12183252+01    |
| .39357165+00         | .14259327+01           | .11517486+00           | .30597569+01           | .12705218+01    |
| .40142562+00         | .14271484+01           | .11225308+00           | .31229673+01           | .13256206+01    |
| .40840694+00         | .14282480+01           | .10970878+00           | .31826862+01           | .13772709+01    |
| .41538825+00         | .14293662+01           | .10720954+00           | .32460575+01           | .14316815+01    |
| .42236956+00         | .14305036+01           | .10475126+00           | .33134412+01           | .14891191+01    |
| .42935088+00         | .14316610+01           | .10232968+00           | .33852495+01           | .15498877+01    |
| .43633219+00         | .14328396+01           | .99940673+00           | .34619556+01           | .16143359+01    |
| .44244084+00         | .14338893+01           | .97873773+00           | .35335196+01           | .16740607+01    |
| .44854949+00         | .14349572+01           | .95825829+00           | .36096735+01           | .17372179+01    |
| .45465814+00         | .14360445+01           | .93794033+00           | .36909011+01           | .18041609+01    |
| .46076678+00         | .14371525+01           | .91775358+00           | .37777622+01           | .18752968+01    |
| .46687543+00         | .14382828+01           | .89766797+00           | .38709044+01           | .19510958+01    |
| .47211142+00         | .14392708+01           | .88050760+00           | .39563116+01           | .20201915+01    |
| .47734740+00         | .14402777+01           | .86337604+00           | .40474440+01           | .20935168+01    |
| .48258339+00         | .14413050+01           | .84625024+00           | .41449428+01           | .21715307+01    |
| .48781937+00         | .14423544+01           | .82910560+00           | .42495665+01           | .22547737+01    |
| .49305536+00         | .14434278+01           | .81191473+00           | .43621622+01           | .23438734+01    |
| .49741868+00         | .14444342+01           | .79753302+00           | .44628475+01           | .24231275+01    |
| .50178199+00         | .14452763+01           | .78307964+00           | .45705029+01           | .25074627+01    |
| .50614527+00         | .14462316+01           | .76853402+00           | .46859484+01           | .25974622+01    |
| .51050855+00         | .14472101+01           | .75387292+00           | .48101484+01           | .26938109+01    |



TABLE 92. (Concluded)

$$M_{\infty} = +19999933+01$$

$$\Theta_s = +21816615+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .51487096+00 | .14482151+01 | .73907152-01 | .49442166+01 | .27972955+01 |
| .51836082+00 | .14490390+01 | .72710864-01 | .50594980+01 | .28858734+01 |
| .52185067+00 | .14498823+01 | .71501918-01 | .51828019+01 | .29802241+01 |
| .52534052+00 | .14507465+01 | .70278376-01 | .53150918+01 | .30810255+01 |
| .52883037+00 | .14516336+01 | .69038011-01 | .54575059+01 | .31890768+01 |
| .53232022+00 | .14525458+01 | .67778379-01 | .56113995+01 | .33053276+01 |
| .53493761+00 | .14532481+01 | .66619221-01 | .57353206+01 | .33985731+01 |
| .53755500+00 | .14539672+01 | .65846220-01 | .58674195+01 | .34976329+01 |
| .54017239+00 | .14547047+01 | .64857654-01 | .60086416+01 | .36031659+01 |
| .54278978+00 | .14554621+01 | .63851818-01 | .61600996+01 | .37159456+01 |
| .54540717+00 | .14562414+01 | .62826581-01 | .63231095+01 | .38368859+01 |
| .54715209+00 | .14567742+01 | .62131114-01 | .64389642+01 | .39225758+01 |
| .54889702+00 | .14573185+01 | .61425105-01 | .65611907+01 | .40127497+01 |
| .55064195+00 | .14578750+01 | .60707696-01 | .66904086+01 | .41078360+01 |
| .55238687+00 | .14584449+01 | .59977792-01 | .68273290+01 | .42083254+01 |
| .55413160+00 | .14590290+01 | .59234254-01 | .69727737+01 | .43147845+01 |
| .55587672+00 | .14596287+01 | .58475770-01 | .71276954+01 | .44278691+01 |
| .55762165+00 | .14602454+01 | .57700805-01 | .72932125+01 | .45483482+01 |
| .55936658+00 | .14608807+01 | .56907650-01 | .74706469+01 | .46771290+01 |
| .56111150+00 | .14615364+01 | .56094006-01 | .76615699+01 | .48152890+01 |
| .56285643+00 | .14622149+01 | .55257700-01 | .78678813+01 | .49641285+01 |
| .56460135+00 | .14629187+01 | .54395802-01 | .80918968+01 | .51252303+01 |
| .56634628+00 | .14636512+01 | .53504772-01 | .83364820+01 | .53005499+01 |
| .56809121+00 | .14644162+01 | .52580342-01 | .86052459+01 | .54925463+01 |
| .56983613+00 | .14652188+01 | .51617078-01 | .89028144+01 | .57043659+01 |
| .57114084+00 | .14658470+01 | .50867498-01 | .91476927+01 | .58781176+01 |

$$.56178868-03 = \Delta S/R$$

$$.15043755+01 = P_s/P_{\infty}$$

$$.12773621+01 = \rho_s/\rho_{\infty}$$

$$.11777205+01 = T_s/T_{\infty}$$

TABLE 93. CONICAL FLOWFIELD  $\theta_s = 12.5$  DEG;  $M_\infty = 2.5$ 

| $\underline{u_s}$    | $\underline{M_\infty}$ | $\underline{\theta_s}$ | $\underline{\theta_w}$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .77280577+00         | .24999849+01           | .21816615+00           | .47313974+00           |                 |
| $\underline{\theta}$ | $\underline{M_1^*}$    | $\underline{\psi_1}$   | $\underline{x}$        | $\underline{r}$ |
| .21816615+00         | .15455825+01           | .21816615+00           | .22553542+01           | .50000000+00    |
| .22550380+00         | .15456632+01           | .21098667+00           | .22833756+01           | .52401147+00    |
| .23300144+00         | .15458888+01           | .20424664+00           | .23127814+01           | .54684982+00    |
| .24041909+00         | .15462386+01           | .19789703+00           | .23436581+01           | .57457339+00    |
| .24783673+00         | .15466957+01           | .19169583+00           | .23761023+01           | .60124626+00    |
| .25525438+00         | .15472463+01           | .18620679+00           | .24102210+01           | .62893861+00    |
| .26267202+00         | .15478789+01           | .18079834+00           | .24461337+01           | .65772790+00    |
| .27008967+00         | .15485844+01           | .17564283+00           | .24839733+01           | .68769962+00    |
| .27663465+00         | .15492610+01           | .17128434+00           | .25190801+01           | .71520263+00    |
| .28317963+00         | .15499836+01           | .16708871+00           | .25559167+01           | .74377184+00    |
| .28972461+00         | .15507491+01           | .16304236+00           | .25946093+01           | .77348647+00    |
| .29626959+00         | .15515537+01           | .15913290+00           | .26352982+01           | .80443417+00    |
| .30281457+00         | .15523950+01           | .15534903+00           | .26761393+01           | .83671187+00    |
| .30935955+00         | .15532711+01           | .15168034+00           | .27233066+01           | .87042730+00    |
| .31590454+00         | .15541801+01           | .14811718+00           | .27709965+01           | .90570108+00    |
| .32157685+00         | .15549935+01           | .14510754+00           | .28145372+01           | .93763566+00    |
| .32724917+00         | .15558300+01           | .14216492+00           | .28602971+01           | .97093982+00    |
| .33292149+00         | .15566894+01           | .13928414+00           | .29084546+01           | .10057215+01    |
| .33859380+00         | .15575711+01           | .13646019+00           | .29592101+01           | .10421021+01    |
| .34426612+00         | .15584752+01           | .13368837+00           | .30127871+01           | .10802170+01    |
| .34993844+00         | .15594018+01           | .13096395+00           | .30694386+01           | .11202184+01    |
| .35561075+00         | .15603510+01           | .12828249+00           | .31294496+01           | .11622775+01    |
| .36041041+00         | .15611723+01           | .12604384+00           | .31830915+01           | .11996164+01    |
| .36521006+00         | .15620106+01           | .12383007+00           | .32395926+01           | .12386998+01    |
| .37000971+00         | .15628663+01           | .12163860+00           | .32992023+01           | .12796759+01    |
| .37460937+00         | .15637400+01           | .11946673+00           | .33622010+01           | .13227114+01    |
| .37960902+00         | .15646326+01           | .11731176+00           | .34289074+01           | .13679949+01    |
| .38440867+00         | .15655447+01           | .11517888+00           | .34996834+01           | .14157401+01    |
| .38920832+00         | .15664775+01           | .11304129+00           | .35749434+01           | .14661907+01    |
| .39313531+00         | .15672568+01           | .11130518+00           | .36401854+01           | .15096749+01    |
| .39706230+00         | .15680515+01           | .10957267+00           | .37090431+01           | .15553304+01    |
| .40096929+00         | .15688624+01           | .10784259+00           | .37818537+01           | .16033540+01    |
| .40491628+00         | .15696904+01           | .10611242+00           | .38589993+01           | .16539687+01    |
| .40884327+00         | .15705366+01           | .10438029+00           | .39409173+01           | .17074286+01    |
| .41277026+00         | .15714023+01           | .10264407+00           | .40261093+01           | .17640249+01    |
| .41669725+00         | .15722886+01           | .10090129+00           | .41211560+01           | .18240935+01    |
| .41975154+00         | .15729944+01           | .99539805+00           | .41980011+01           | .18734611+01    |
| .42280581+00         | .15737149+01           | .98171696+00           | .42791595+01           | .19253742+01    |
| .42586008+00         | .15744507+01           | .96795324+00           | .43650473+01           | .19800719+01    |
| .42891436+00         | .15752030+01           | .95408995+00           | .44561387+01           | .20378264+01    |

TABLE 93. (Concluded)

$$M_{\infty} = .24999849+01$$

$$\Theta_s = .21816615+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .43196863+00 | .15759731+01 | .94010830-01 | .45529816+01 | .20989513+01 |
| .43502290+00 | .15767622+01 | .92597892-01 | .46562074+01 | .21638070+01 |
| .43807717+00 | .15775720+01 | .91170985-01 | .47665524+01 | .22328135+01 |
| .44025880+00 | .15781642+01 | .90139836-01 | .48502021+01 | .22849143+01 |
| .44244042+00 | .15787686+01 | .89098165-01 | .49382850+01 | .23395879+01 |
| .44462204+00 | .15793860+01 | .88044900-01 | .50312126+01 | .23970675+01 |
| .44680367+00 | .15800175+01 | .86978704-01 | .51294537+01 | .24576185+01 |
| .44898529+00 | .15806641+01 | .85898172-01 | .52335466+01 | .25215447+01 |
| .45116691+00 | .15813269+01 | .84801707-01 | .53441098+01 | .25891949+01 |
| .45334854+00 | .15820073+01 | .83687525-01 | .54618631+01 | .26609741+01 |
| .45465751+00 | .15824248+01 | .83009642-01 | .55363105+01 | .27062170+01 |
| .45596648+00 | .15828494+01 | .82324136-01 | .56138523+01 | .27532304+01 |
| .45727546+00 | .15832818+01 | .81630472-01 | .56947173+01 | .28021426+01 |
| .45858443+00 | .15837224+01 | .80928539-01 | .57791598+01 | .28530958+01 |
| .45989341+00 | .15841716+01 | .80216192-01 | .58674640+01 | .29062489+01 |
| .46120238+00 | .15846300+01 | .79494178-01 | .59599459+01 | .29617783+01 |
| .46251135+00 | .15850982+01 | .78761227-01 | .60569633+01 | .30198637+01 |
| .46382033+00 | .15855770+01 | .78016445-01 | .61589197+01 | .30807896+01 |
| .46512930+00 | .15860670+01 | .77258814-01 | .62662740+01 | .31447515+01 |
| .46643827+00 | .15865691+01 | .76467239-01 | .63795493+01 | .32120597+01 |
| .46774725+00 | .15870844+01 | .75700454-01 | .64993478+01 | .32830487+01 |
| .46905622+00 | .15876139+01 | .74896984-01 | .66263678+01 | .33581051+01 |
| .47036520+00 | .15881569+01 | .74075155-01 | .67614200+01 | .34376777+01 |
| .47167417+00 | .15887208+01 | .73233109-01 | .69054615+01 | .35222953+01 |
| .47298314+00 | .15893015+01 | .72366521-01 | .70596256+01 | .36125832+01 |
| .47313974+00 | .15893723+01 | .72263494-01 | .70788096+01 | .36237991+01 |

$$.25230795-02 = \Delta S/R$$

$$.17144398+01 = P_s/P_{\infty}$$

$$.13809867+01 = \rho_s/\rho_{\infty}$$

$$.12419097+01 = T_s/T_{\infty}$$



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TABLE 94. CONICAL FLOWFIELD  $\theta_s = 12.5 \text{ DEG}$ ;  $M_\infty = 3.0$

| $\underline{u_s}$    | $\underline{M_\infty}$ | $\underline{\theta_s}$ | $\underline{\theta_w}$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .81949562+00         | .29999998+01           | .21616615+00           | .41518334+00           |                 |
| $\underline{\theta}$ | $\underline{M_1^*}$    | $\underline{\psi_1}$   | $\underline{x}$        | $\underline{r}$ |
| .21816615+00         | .16389605+01           | .21816615+00           | .22553542+01           | .50000000+00    |
| .22427460+00         | .16390191+01           | .21221970+00           | .22841776+01           | .52104902+00    |
| .23038345+00         | .16391849+01           | .20657493+00           | .23143785+01           | .54283254+00    |
| .23649210+00         | .16394451+01           | .20120119+00           | .23460461+01           | .56540155+00    |
| .24260075+00         | .16397093+01           | .19607177+00           | .23792796+01           | .58881211+00    |
| .24870940+00         | .16402085+01           | .19116318+00           | .24141891+01           | .61312586+00    |
| .25481804+00         | .16406954+01           | .18645464+00           | .24508967+01           | .63841069+00    |
| .26092669+00         | .16412437+01           | .18192763+00           | .24895390+01           | .66474190+00    |
| .26703534+00         | .16418483+01           | .17756550+00           | .25302681+01           | .69220291+00    |
| .27227133+00         | .16424080+01           | .17394635+00           | .25669688+01           | .71671046+00    |
| .27750731+00         | .16430036+01           | .17042860+00           | .26054478+01           | .74218120+00    |
| .28274330+00         | .16436331+01           | .16700424+00           | .26458378+01           | .76868661+00    |
| .28797928+00         | .16442951+01           | .16366576+00           | .26882866+01           | .79630664+00    |
| .29321527+00         | .16449882+01           | .16040615+00           | .27329589+01           | .82512879+00    |
| .29845125+00         | .16457113+01           | .15721877+00           | .27800391+01           | .85525156+00    |
| .30368724+00         | .16464639+01           | .15409732+00           | .28297341+01           | .88678475+00    |
| .30892322+00         | .16472452+01           | .15103580+00           | .28822775+01           | .91985190+00    |
| .31328654+00         | .16479181+01           | .14852612+00           | .29284291+01           | .94867958+00    |
| .31764986+00         | .16486109+01           | .14605075+00           | .29769136+01           | .97875918+00    |
| .32201318+00         | .16493237+01           | .14360647+00           | .30279230+01           | .10101913+01    |
| .32637651+00         | .16500565+01           | .14119010+00           | .30816730+01           | .10430685+01    |
| .33073983+00         | .16508099+01           | .13879846+00           | .31384061+01           | .10775771+01    |
| .33510315+00         | .16515841+01           | .13642832+00           | .31983959+01           | .11137990+01    |
| .33946647+00         | .16523800+01           | .13407646+00           | .32619542+01           | .11519157+01    |
| .34382979+00         | .16531982+01           | .13173956+00           | .33294367+01           | .11921106+01    |
| .34732044+00         | .16538695+01           | .12987849+00           | .33865201+01           | .12259029+01    |
| .35081110+00         | .16545564+01           | .12802294+00           | .34466122+01           | .12612806+01    |
| .35430176+00         | .16552594+01           | .12617099+00           | .35099805+01           | .12983809+01    |
| .35779241+00         | .16559793+01           | .12432063+00           | .35769275+01           | .13373580+01    |
| .36128307+00         | .16567171+01           | .12246972+00           | .36477974+01           | .13783874+01    |
| .36477373+00         | .16574737+01           | .12061595+00           | .37229834+01           | .14216687+01    |
| .36826436+00         | .16582509+01           | .11875699+00           | .38029372+01           | .14674309+01    |
| .37175496+00         | .16590503+01           | .11689017+00           | .38881817+01           | .15159379+01    |
| .37437291+00         | .16596648+01           | .11546297+00           | .39559506+01           | .15543029+01    |
| .37699085+00         | .16602929+01           | .11406821+00           | .40273320+01           | .15945323+01    |
| .37960880+00         | .16609386+01           | .11264438+00           | .41026599+01           | .16367938+01    |
| .38222675+00         | .16615938+01           | .11120978+00           | .41823151+01           | .16812782+01    |
| .38484470+00         | .16622684+01           | .10976260+00           | .42667328+01           | .17282027+01    |
| .38746265+00         | .16629608+01           | .10830085+00           | .43564153+01           | .17778178+01    |
| .39008059+00         | .16636724+01           | .10682222+00           | .44519454+01           | .18304134+01    |

TABLE 94. (Concluded)

$$M_{\infty} = .29999998+01$$

$$\Theta_s = .21816615+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .39269854+00 | .16644047+01 | .10532411+00 | .45540026+01 | .18863267+01 |
| .39444384+00 | .16649054+01 | .10431318+00 | .46260560+01 | .19256381+01 |
| .39618914+00 | .16654168+01 | .10329128+00 | .47016363+01 | .19667.37+01 |
| .39793444+00 | .16659395+01 | .10225742+00 | .47810505+01 | .20097650+01 |
| .39967974+00 | .16664744+01 | .10121036+00 | .48646473+01 | .20549037+01 |
| .40142503+00 | .16670222+01 | .10014876+00 | .49528236+01 | .21023448+01 |
| .40317033+00 | .16675841+01 | .99071100-01 | .50460318+01 | .21523106+01 |
| .40491563+00 | .16681610+01 | .97975856-01 | .51447951+01 | .22050574+01 |
| .40666093+00 | .16687543+01 | .96860956-01 | .52497191+01 | .22608813+01 |
| .40753358+00 | .16693576+01 | .96295450-01 | .53047083+01 | .22900532+01 |
| .40840623+00 | .16693655+01 | .95724199-01 | .53615127+01 | .23201285+01 |
| .40927888+00 | .16696782+01 | .95146835-01 | .54202405+01 | .23511601+01 |
| .41015153+00 | .16699962+01 | .94563804-01 | .54810099+01 | .23832054+01 |
| .41102418+00 | .16703195+01 | .93972344-01 | .55439507+01 | .24163276+01 |
| .41189682+00 | .16706484+01 | .93374405-01 | .56092049+01 | .24505955+01 |
| .41276947+00 | .16709633+01 | .92768736-01 | .56769286+01 | .24860849+01 |
| .41364212+00 | .16713244+01 | .92164490-01 | .57472939+01 | .25228794+01 |
| .41451477+00 | .16716723+01 | .91532297-01 | .58204908+01 | .25610708+01 |
| .41518334+00 | .16719435+01 | .91048945-01 | .58786169+01 | .25913394+01 |

$$.75941533-02 = \Delta S/R$$

$$.19632718+01 = P_s/P_{\infty}$$

$$.14943952+01 = \rho_s/\rho_{\infty}$$

$$.13137568+01 = T_s/T_{\infty}$$

TABLE 95. CONICAL FLOWFIELD  $\theta_s = 12.5$  DEG;  $M_\infty = 4.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .87539629+00 | .39999987+01 | .21816615+00 | .35169780+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .21816615+00 | .17507597+01 | .21816615+00 | .22553542+01 | .50000000+00 |
| .22165681+00 | .17507806+01 | .21472909+00 | .22773778+01 | .51322923+00 |
| .22514746+00 | .17508410+01 | .21139404+00 | .23001562+01 | .52660607+00 |
| .22863812+00 | .17509381+01 | .20815372+00 | .23237267+01 | .54074810+00 |
| .23212678+00 | .17510694+01 | .20500150+00 | .23481293+01 | .55567420+00 |
| .23561943+00 | .17512331+01 | .20193126+00 | .23734075+01 | .56980469+00 |
| .23911009+00 | .17514268+01 | .19893737+00 | .23996083+01 | .58496138+00 |
| .24260075+00 | .17516491+01 | .19601402+00 | .24267824+01 | .60056786+00 |
| .24609140+00 | .17518983+01 | .19315814+00 | .24549848+01 | .61664949+00 |
| .24958206+00 | .17521732+01 | .19036340+00 | .24842754+01 | .63323379+00 |
| .25307272+00 | .17524726+01 | .18762416+00 | .25147192+01 | .65035051+00 |
| .25656337+00 | .17527955+01 | .18494236+00 | .25463870+01 | .66803205+00 |
| .26005403+00 | .17531410+01 | .18230824+00 | .25793563+01 | .68631355+00 |
| .26354469+00 | .17535085+01 | .17972018+00 | .26137119+01 | .70523350+00 |
| .26703534+00 | .17538972+01 | .17717472+00 | .26495467+01 | .72483383+00 |
| .27052600+00 | .17543066+01 | .17466854+00 | .26869631+01 | .74516072+00 |
| .27314399+00 | .17546270+01 | .17228127+00 | .27161306+01 | .76691285+00 |
| .27576198+00 | .17549588+01 | .17007759+00 | .27463027+01 | .77712520+00 |
| .27837998+00 | .17553016+01 | .16915673+00 | .27775354+01 | .79382284+00 |
| .28099797+00 | .17556560+01 | .16735384+00 | .28098896+01 | .81103262+00 |
| .28361596+00 | .17560213+01 | .16566627+00 | .28434313+01 | .82878451+00 |
| .28623395+00 | .17563978+01 | .16379245+00 | .28782315+01 | .84710946+00 |
| .28885195+00 | .17567854+01 | .16203123+00 | .29143683+01 | .86604221+00 |
| .29146994+00 | .17571843+01 | .16028132+00 | .29519268+01 | .88562033+00 |
| .29408793+00 | .17575945+01 | .15854147+00 | .29909998+01 | .90588473+00 |
| .29670592+00 | .17580163+01 | .15681038+00 | .30316892+01 | .92688024+00 |
| .29932392+00 | .17584498+01 | .15508673+00 | .30741070+01 | .94865599+00 |
| .30194191+00 | .17588953+01 | .15336916+00 | .31183769+01 | .97126604+00 |
| .30455990+00 | .17593530+01 | .15165629+00 | .31646352+01 | .99477008+00 |
| .30717789+00 | .17598233+01 | .14994666+00 | .32130336+01 | .10192341+01 |
| .30979589+00 | .17603066+01 | .14823870+00 | .32637411+01 | .10447315+01 |
| .31154121+00 | .17608032+01 | .14710027+00 | .32989213+01 | .10623440+01 |
| .31328654+00 | .17609720+01 | .14596154+00 | .33352727+01 | .10804786+01 |
| .31503187+00 | .17613140+01 | .14482178+00 | .33728615+01 | .10991639+01 |
| .31677718+00 | .17616631+01 | .14368065+00 | .34117593+01 | .11184308+01 |
| .31852248+00 | .17620169+01 | .14253752+00 | .34520447+01 | .11383132+01 |
| .32026777+00 | .17623817+01 | .14139178+00 | .34938032+01 | .11588477+01 |
| .32201307+00 | .17627517+01 | .14024279+00 | .35371279+01 | .11800744+01 |
| .32375837+00 | .17631291+01 | .13908986+00 | .35821203+01 | .12020368+01 |
| .32550367+00 | .17635141+01 | .13793238+00 | .36288916+01 | .12247625+01 |

TABLE 95. (Concluded)

$$M_{\infty} = .39999987+01$$

$$\Theta_s = .21816615+00$$

| $\underline{\Theta}$ | $\underline{M_1^*}$ | $\underline{\psi_1}$ | $\underline{x}$ | $\underline{r}$ |
|----------------------|---------------------|----------------------|-----------------|-----------------|
| .32724897+00         | .17639073+01        | .13676945+00         | .36775651+01    | .12483640+01    |
| .32899427+00         | .17643088+01        | .13580040+00         | .37282757+01    | .12728390+01    |
| .33073957+00         | .17647191+01        | .13442429+00         | .37811736+01    | .12982713+01    |
| .33248486+00         | .17651387+01        | .13324023+00         | .38364246+01    | .13247313+01    |
| .33423016+00         | .17655679+01        | .13204714+00         | .38942147+01    | .13522960+01    |
| .33597546+00         | .17660075+01        | .13084393+00         | .39547511+01    | .13810591+01    |
| .33684811+00         | .17662313+01        | .13023816+00         | .39861209+01    | .13959177+01    |
| .33772076+00         | .17664579+01        | .12962939+00         | .40182670+01    | .14111129+01    |
| .33859341+00         | .17666873+01        | .12901748+00         | .40512235+01    | .14266588+01    |
| .33946606+00         | .17669198+01        | .12840220+00         | .40850262+01    | .14425708+01    |
| .34033871+00         | .17671553+01        | .12778335+00         | .41197137+01    | .14588648+01    |
| .34121136+00         | .17673940+01        | .12716079+00         | .41553273+01    | .14755563+01    |
| .34208401+00         | .17676359+01        | .12653426+00         | .41919107+01    | .14926697+01    |
| .34295665+00         | .17678813+01        | .12590355+00         | .42295113+01    | .15102168+01    |
| .34382930+00         | .17681302+01        | .12526842+00         | .42681797+01    | .15282269+01    |
| .34470195+00         | .17683826+01        | .12462859+00         | .43079699+01    | .15467164+01    |
| .34557460+00         | .17686391+01        | .12398380+00         | .43489413+01    | .15657123+01    |
| .34644725+00         | .17688994+01        | .12333376+00         | .43911565+01    | .15852407+01    |
| .34731990+00         | .17691639+01        | .12267819+00         | .44346838+01    | .16053300+01    |
| .34819255+00         | .17694326+01        | .12201669+00         | .44795972+01    | .16260111+01    |
| .34906520+00         | .17697059+01        | .12134893+00         | .45259768+01    | .16473175+01    |
| .34993785+00         | .17699838+01        | .12067455+00         | .45739104+01    | .16692855+01    |
| .35081050+00         | .17702667+01        | .11999307+00         | .46234934+01    | .16919547+01    |
| .35168315+00         | .17705547+01        | .11930411+00         | .46748303+01    | .17153666+01    |
| .35169780+00         | .17705596+01        | .11929249+00         | .46757077+01    | .17157683+01    |

$$.33282280-01 = \Delta S/R$$

$$.25776198+01 = P_s/P_{\infty}$$

$$.17415842+01 = \rho_s/\rho_{\infty}$$

$$.14800432+01 = T_s/T_{\infty}$$



TABLE 96. CONICAL FLOWFIELD  $\theta_s = 12.5$  DEG;  $M_\infty = 5.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .90564438+00 | .49999846+01 | .21816615+00 | .31910178+00 |              |
| $\theta$     | $M^*_1$      | $\psi_1$     | $x$          | $r$          |
| .21816615+00 | .18112548+01 | .21816615+00 | .22553542+01 | .50000000+00 |
| .22165681+00 | .18112763+01 | .21472868+00 | .22821712+01 | .51430947+00 |
| .22514746+00 | .18113388+01 | .21139242+00 | .23100798+01 | .52907886+00 |
| .22863812+00 | .18114395+01 | .20814843+00 | .23391465+01 | .54433641+00 |
| .23212878+00 | .18115758+01 | .20498933+00 | .23694450+01 | .56011301+00 |
| .23561943+00 | .18117457+01 | .20190817+00 | .24010555+01 | .57644236+00 |
| .23911009+00 | .18119474+01 | .19889851+00 | .24340665+01 | .59336139+00 |
| .24216441+00 | .18121486+01 | .19631902+00 | .24641767+01 | .60868111+00 |
| .24521874+00 | .18123721+01 | .19378594+00 | .24955056+01 | .62451299+00 |
| .24827306+00 | .18126170+01 | .19129571+00 | .25281321+01 | .64088956+00 |
| .25132737+00 | .18128828+01 | .18884495+00 | .25621424+01 | .65784627+00 |
| .25438171+00 | .18131687+01 | .18643037+00 | .25976313+01 | .67542198+00 |
| .25743604+00 | .18134744+01 | .18404684+00 | .26347033+01 | .69365941+00 |
| .26005403+00 | .18137520+01 | .18203150+00 | .26678268+01 | .70985374+00 |
| .26267202+00 | .18140436+01 | .18003430+00 | .27022783+01 | .72660127+00 |
| .26529001+00 | .18143494+01 | .17805537+00 | .27381457+01 | .74393762+00 |
| .26790801+00 | .18146690+01 | .17609285+00 | .27755257+01 | .76190179+00 |
| .27052600+00 | .18150027+01 | .17414489+00 | .28145245+01 | .78053661+00 |
| .27314399+00 | .18153505+01 | .17220964+00 | .28552595+01 | .79988923+00 |
| .27532565+00 | .18156511+01 | .17040628+00 | .28970625+01 | .81660223+00 |
| .27750731+00 | .18159616+01 | .16900731+00 | .29273694+01 | .83388298+00 |
| .27968897+00 | .18162822+01 | .16741460+00 | .29655834+01 | .85176777+00 |
| .28187063+00 | .18166131+01 | .16582600+00 | .30053670+01 | .87029634+00 |
| .28405229+00 | .18169545+01 | .16424029+00 | .30468297+01 | .88951228+00 |
| .28623395+00 | .18173065+01 | .16265622+00 | .30900934+01 | .90946379+00 |
| .28797728+00 | .18175961+01 | .16138928+00 | .31260906+01 | .92599005+00 |
| .28972461+00 | .18178929+01 | .16012185+00 | .31634018+01 | .94305087+00 |
| .29146992+00 | .18181974+01 | .15885324+00 | .32021092+01 | .96067858+00 |
| .29321522+00 | .18185099+01 | .15758269+00 | .32423032+01 | .97890873+00 |
| .29496052+00 | .18188303+01 | .15630934+00 | .32840834+01 | .99778037+00 |
| .29670582+00 | .18191587+01 | .15503239+00 | .33275584+01 | .10173341+01 |
| .29801479+00 | .18194136+01 | .15407172+00 | .33613489+01 | .10324800+01 |
| .29932377+00 | .18196673+01 | .15310808+00 | .33962158+01 | .10400566+01 |
| .30063274+00 | .18199291+01 | .15214103+00 | .34322187+01 | .10640895+01 |
| .30194172+00 | .18201960+01 | .15117013+00 | .34694226+01 | .10804039+01 |
| .30325069+00 | .18204684+01 | .15019487+00 | .35078978+01 | .10976268+01 |
| .30455966+00 | .18207463+01 | .14921476+00 | .35477209+01 | .11151861+01 |
| .30543231+00 | .18209348+01 | .14855837+00 | .35750596+01 | .11272107+01 |
| .30630476+00 | .18211259+01 | .14789943+00 | .36030609+01 | .11394973+01 |
| .30717761+00 | .18213198+01 | .14723772+00 | .36317531+01 | .11520586+01 |

TABLE 96. (Concluded)

$$M_{\infty} = .49999846+01$$

$$\Theta_s = .21816615+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .30805026+00 | .18215164+01 | .14657307+00 | .36611665+01 | .11649064+01 |
| .30892291+00 | .18217158+01 | .14590529+00 | .36913330+01 | .11780531+01 |
| .30979556+00 | .18219183+01 | .14523415+00 | .37222869+01 | .11915118+01 |
| .31023188+00 | .18220207+01 | .14489725+00 | .37380704+01 | .11983626+01 |
| .31066821+00 | .18221238+01 | .14455944+00 | .37540646+01 | .12052966+01 |
| .31110453+00 | .18222277+01 | .14422067+00 | .37702748+01 | .12123160+01 |
| .31154086+00 | .18223325+01 | .14388092+00 | .37867054+01 | .12194225+01 |
| .31197718+00 | .18224380+01 | .14354016+00 | .38033626+01 | .12266185+01 |
| .31241351+00 | .18225443+01 | .14319835+00 | .38202615+01 | .12339058+01 |
| .31284983+00 | .18226516+01 | .14285547+00 | .38373778+01 | .12412867+01 |
| .31328616+00 | .18227596+01 | .14251147+00 | .38547473+01 | .12487634+01 |
| .31372248+00 | .18228686+01 | .14216633+00 | .38723662+01 | .12563383+01 |
| .31415880+00 | .18229784+01 | .14182001+00 | .38902412+01 | .12640140+01 |
| .31459513+00 | .18230891+01 | .14147248+00 | .39083785+01 | .12717928+01 |
| .31503145+00 | .18232007+01 | .14112367+00 | .39267853+01 | .12796774+01 |
| .31546778+00 | .18233133+01 | .14077356+00 | .39454686+01 | .12876706+01 |
| .31590410+00 | .18234269+01 | .14042213+00 | .39644358+01 | .12957752+01 |
| .31634043+00 | .18235414+01 | .14006930+00 | .39836949+01 | .13039942+01 |
| .31677675+00 | .18236569+01 | .13971504+00 | .40032535+01 | .13123305+01 |
| .31721308+00 | .18237735+01 | .13935930+00 | .40231201+01 | .13207874+01 |
| .31764940+00 | .18238910+01 | .13900207+00 | .40433039+01 | .13293683+01 |
| .31808573+00 | .18240097+01 | .13864322+00 | .40638132+01 | .13380765+01 |
| .31852205+00 | .18241294+01 | .13828278+00 | .40846684+01 | .13469159+01 |
| .31895838+00 | .18242502+01 | .13792065+00 | .41058488+01 | .13558900+01 |
| .31910178+00 | .18242902+01 | .13780122+00 | .41128908+01 | .13508697+01 |

$$.85285351-01 = \Delta S/R$$

$$.33504457+01 = P_s/P_{\infty}$$

$$.19963617+01 = \rho_s/\rho_{\infty}$$

$$.16782759+01 = T_s/T_{\infty}$$

TABLE 97. CONICAL FLOWFIELD  $\theta_s = 12.5 \text{ DEG}$ ;  $M_\infty = 6.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .92358843+00 | .59999951+01 | .21816615+00 | .30008977+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .21816615+00 | .18471422+01 | .21816615+00 | .22553542+01 | .50000000+00 |
| .22078414+00 | .18471547+01 | .21557832+00 | .22783438+01 | .51135812+00 |
| .22340214+00 | .18471911+01 | .21304791+00 | .23021207+01 | .52302895+00 |
| .22602013+00 | .18472501+01 | .21057084+00 | .23267260+01 | .53502873+00 |
| .22863812+00 | .18473308+01 | .20814329+00 | .23522042+01 | .54737502+00 |
| .23125611+00 | .18474320+01 | .20576171+00 | .23786039+01 | .56008684+00 |
| .23387410+00 | .18475529+01 | .20342278+00 | .24059774+01 | .57318462+00 |
| .23649210+00 | .18476928+01 | .20112335+00 | .24343814+01 | .58669054+00 |
| .23911009+00 | .18478510+01 | .19886045+00 | .24638782+01 | .60062869+00 |
| .24129175+00 | .18479964+01 | .19700055+00 | .24893420+01 | .61259282+00 |
| .24347341+00 | .18481538+01 | .19516247+00 | .25156538+01 | .62449159+00 |
| .24565507+00 | .18483230+01 | .19334467+00 | .25428590+01 | .63754257+00 |
| .24783673+00 | .18485038+01 | .19154567+00 | .25710078+01 | .65056492+00 |
| .25001839+00 | .18486960+01 | .18976401+00 | .26001530+01 | .66397899+00 |
| .25220005+00 | .18488994+01 | .18799826+00 | .26303529+01 | .67780705+00 |
| .25438171+00 | .18491140+01 | .18624701+00 | .26616705+01 | .69207312+00 |
| .25656337+00 | .18493397+01 | .18450885+00 | .26941749+01 | .70680346+00 |
| .25830870+00 | .18495283+01 | .18312682+00 | .27210828+01 | .71894100+00 |
| .26005403+00 | .18497239+01 | .18175156+00 | .27488397+01 | .73140959+00 |
| .26179936+00 | .18499266+01 | .18038234+00 | .27774903+01 | .74422617+00 |
| .26354469+00 | .18501365+01 | .17901845+00 | .28070830+01 | .75740902+00 |
| .26529001+00 | .18503536+01 | .17765914+00 | .28376700+01 | .77097777+00 |
| .26703534+00 | .18505779+01 | .17630366+00 | .28693080+01 | .78495372+00 |
| .26878067+00 | .18508096+01 | .17495124+00 | .29020584+01 | .79935995+00 |
| .27052600+00 | .18510487+01 | .17360109+00 | .29359875+01 | .81422128+00 |
| .27183500+00 | .18512330+01 | .17258947+00 | .29622513+01 | .82568220+00 |
| .27314399+00 | .18514216+01 | .17157832+00 | .29892521+01 | .83742671+00 |
| .27445299+00 | .18516146+01 | .17056727+00 | .30170253+01 | .84946803+00 |
| .27576198+00 | .18518121+01 | .16955593+00 | .30456088+01 | .86182030+00 |
| .27707097+00 | .18520143+01 | .16854395+00 | .30750431+01 | .87449846+00 |
| .27837995+00 | .18522214+01 | .16753091+00 | .31053717+01 | .88751873+00 |
| .27968892+00 | .18524334+01 | .16651637+00 | .31366420+01 | .90089865+00 |
| .28099789+00 | .18526502+01 | .16549989+00 | .31689050+01 | .91466703+00 |
| .28187054+00 | .18527975+01 | .16482093+00 | .31909919+01 | .92404944+00 |
| .28274319+00 | .18529470+01 | .16414075+00 | .32135620+01 | .93362553+00 |
| .28361584+00 | .18530989+01 | .16345922+00 | .32366329+01 | .94339190+00 |
| .28448849+00 | .18532531+01 | .16277617+00 | .32602243+01 | .95335567+00 |
| .28536114+00 | .18534097+01 | .16209145+00 | .32843569+01 | .96352449+00 |
| .28623379+00 | .18535687+01 | .16140489+00 | .33090520+01 | .97390620+00 |
| .28710644+00 | .18537303+01 | .16071632+00 | .33343327+01 | .98450928+00 |

TABLE 97. (Concluded)

$$M_{\infty} = .59999951+01$$

$$\Theta_s = .21816615+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .28797909+00 | .18538944+01 | .16002555+00 | .33602237+01 | .99534273+00 |
| .28841541+00 | .18539774+01 | .15967928+00 | .33734058+01 | .10008487+01 |
| .28885174+00 | .18540611+01 | .15933239+00 | .33867502+01 | .10064158+01 |
| .28928806+00 | .18541455+01 | .15898487+00 | .34002606+01 | .10120454+01 |
| .28972439+00 | .18542305+01 | .15863667+00 | .34139404+01 | .10177368+01 |
| .29016071+00 | .18543163+01 | .15828777+00 | .34277931+01 | .10234973+01 |
| .29059704+00 | .18544027+01 | .15793816+00 | .34418231+01 | .10293223+01 |
| .29103336+00 | .18544899+01 | .15758779+00 | .34560339+01 | .10352153+01 |
| .29146969+00 | .18545777+01 | .15723665+00 | .34704299+01 | .10411777+01 |
| .29190601+00 | .18546663+01 | .15688469+00 | .34850151+01 | .10472112+01 |
| .29234233+00 | .18547557+01 | .15653192+00 | .34997940+01 | .10533172+01 |
| .29277866+00 | .18548457+01 | .15617827+00 | .35147712+01 | .10594976+01 |
| .29321498+00 | .18549366+01 | .15582372+00 | .35299513+01 | .10657538+01 |
| .29365131+00 | .18550282+01 | .15546824+00 | .35453393+01 | .10720879+01 |
| .29408763+00 | .18551206+01 | .15511188+00 | .35609399+01 | .10785014+01 |
| .29452396+00 | .18552138+01 | .15475436+00 | .35767568+01 | .10849965+01 |
| .29496028+00 | .18553078+01 | .15439589+00 | .35928009+01 | .10915750+01 |
| .29539661+00 | .18554027+01 | .15403635+00 | .36090720+01 | .10982388+01 |
| .29583293+00 | .18554984+01 | .15367670+00 | .36255780+01 | .11049902+01 |
| .29626926+00 | .18555949+01 | .15331390+00 | .36423251+01 | .11118314+01 |
| .29670558+00 | .18556923+01 | .15295894+00 | .36593190+01 | .11187645+01 |
| .29714191+00 | .18557906+01 | .15258672+00 | .36765668+01 | .11257921+01 |
| .29757823+00 | .18558898+01 | .15222125+00 | .36940747+01 | .11329163+01 |
| .29801456+00 | .18559899+01 | .15185446+00 | .37118503+01 | .11401399+01 |
| .29845088+00 | .18560910+01 | .15148631+00 | .37299009+01 | .11474656+01 |
| .29888720+00 | .18561930+01 | .15111677+00 | .37482337+01 | .11548960+01 |
| .29932353+00 | .18562960+01 | .15074676+00 | .37668569+01 | .11624340+01 |
| .29975985+00 | .18564000+01 | .15037325+00 | .37857787+01 | .11700825+01 |
| .30008977+00 | .18564793+01 | .15009656+00 | .38002899+01 | .11759412+01 |

$$.16379614+00 = \Delta S/R$$

$$.42847755+01 = P_s/P_{\infty}$$

$$.22423020+01 = \rho_s/\rho_{\infty}$$

$$.19108825+01 = T_s/T_{\infty}$$



TABLE 98. CONICAL FLOWFIELD  $\theta_s = 12.5 \text{ DEG}$ ;  $M_\infty = 8.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .94230759+00 | .79999884+01 | .21816615+00 | .27993695+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .21816615+00 | .18853798+01 | .21816615+00 | .22553542+01 | .50000000+00 |
| .21947515+00 | .18853830+01 | .21686477+00 | .22689756+01 | .50613672+00 |
| .22078414+00 | .18853925+01 | .21557817+00 | .22828668+01 | .51237328+00 |
| .22209314+00 | .18854081+01 | .21430569+00 | .22970359+01 | .51871265+00 |
| .22340214+00 | .18854297+01 | .21304673+00 | .23114916+01 | .52515797+00 |
| .22471113+00 | .18854570+01 | .21180066+00 | .23262429+01 | .53171255+00 |
| .22602013+00 | .18854900+01 | .21056693+00 | .23412996+01 | .53837992+00 |
| .22732912+00 | .18855286+01 | .20934496+00 | .23566714+01 | .54516364+00 |
| .22863812+00 | .18855725+01 | .20813422+00 | .23723689+01 | .55206750+00 |
| .22994712+00 | .18856218+01 | .20693419+00 | .23884031+01 | .55909549+00 |
| .23125611+00 | .18856762+01 | .20574435+00 | .24047855+01 | .56625177+00 |
| .23256511+00 | .18857358+01 | .20456422+00 | .24215282+01 | .57354072+00 |
| .23387410+00 | .18858004+01 | .20339331+00 | .24386441+01 | .58096692+00 |
| .23518310+00 | .18858700+01 | .20223114+00 | .24561464+01 | .58853519+00 |
| .23649210+00 | .18859444+01 | .20107727+00 | .24740496+01 | .59625065+00 |
| .23780109+00 | .18860237+01 | .19993124+00 | .24923684+01 | .60411859+00 |
| .23911009+00 | .18861077+01 | .19879260+00 | .25111186+01 | .61214468+00 |
| .24041909+00 | .18861964+01 | .19766092+00 | .25303171+01 | .62033488+00 |
| .24172808+00 | .18862898+01 | .19653575+00 | .25499812+01 | .62869543+00 |
| .24303708+00 | .18863879+01 | .19541669+00 | .25701297+01 | .63723297+00 |
| .24434607+00 | .18864906+01 | .19430328+00 | .25907823+01 | .64595452+00 |
| .24565507+00 | .18865978+01 | .19319512+00 | .26119601+01 | .65486749+00 |
| .24696407+00 | .18867097+01 | .19209178+00 | .26336852+01 | .66397930+00 |
| .24827306+00 | .18868261+01 | .19099284+00 | .26559813+01 | .67329975+00 |
| .24958206+00 | .18869471+01 | .18989786+00 | .26788738+01 | .68283628+00 |
| .25089106+00 | .18870727+01 | .18880643+00 | .27023893+01 | .69259884+00 |
| .25176372+00 | .18871589+01 | .18808056+00 | .27184266+01 | .69923772+00 |
| .25263638+00 | .18872472+01 | .18735594+00 | .27347623+01 | .70598460+00 |
| .25350905+00 | .18873376+01 | .18663244+00 | .27514061+01 | .71284269+00 |
| .25438171+00 | .18874300+01 | .18590993+00 | .27683677+01 | .71981593+00 |
| .25525438+00 | .18875246+01 | .18518827+00 | .27856571+01 | .72690734+00 |
| .25612704+00 | .18876212+01 | .18446734+00 | .28032853+01 | .73412084+00 |
| .25699970+00 | .18877199+01 | .18374698+00 | .28212637+01 | .74146046+00 |
| .25787237+00 | .18878207+01 | .18302706+00 | .28396038+01 | .74893023+00 |
| .25874503+00 | .18879237+01 | .18230743+00 | .28583182+01 | .75653452+00 |
| .25961770+00 | .18880288+01 | .18158796+00 | .28774201+01 | .76427794+00 |
| .26049036+00 | .18881361+01 | .18086848+00 | .28969232+01 | .77216524+00 |
| .26136303+00 | .18882457+01 | .18014885+00 | .29168417+01 | .78020133+00 |
| .26223568+00 | .18883576+01 | .17942892+00 | .29371909+01 | .78839156+00 |
| .26310833+00 | .18884720+01 | .17870853+00 | .29579870+01 | .79674151+00 |

TABLE 98. (Concluded)

$$M_{\infty} = .79999884+01$$

$$\Theta_s = .21816615+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .26398078+00 | .18885887+01 | .17798750+00 | .29792470+01 | .80525707+00 |
| .26485363+00 | .18887074+01 | .17726556+00 | .30009888+01 | .81394439+00 |
| .26572628+00 | .18888290+01 | .17654233+00 | .30232314+01 | .82281014+00 |
| .26659893+00 | .18889527+01 | .17581883+00 | .30459950+01 | .83186118+00 |
| .26747158+00 | .18890790+01 | .17509348+00 | .30693007+01 | .84110483+00 |
| .26834423+00 | .18892077+01 | .17436657+00 | .30931712+01 | .85054892+00 |
| .26921688+00 | .18893389+01 | .17363790+00 | .31176302+01 | .86020158+00 |
| .27008953+00 | .18894727+01 | .17290725+00 | .31427039+01 | .87007177+00 |
| .27096217+00 | .18896092+01 | .17217442+00 | .31684186+01 | .88016858+00 |
| .27183482+00 | .18897485+01 | .17143914+00 | .31948038+01 | .89050205+00 |
| .27270747+00 | .18898904+01 | .17070121+00 | .32218903+01 | .90108273+00 |
| .27358012+00 | .18899625+01 | .17003315+00 | .32357068+01 | .90646932+00 |
| .27358012+00 | .18900353+01 | .16996033+00 | .32497112+01 | .91192196+00 |
| .27401645+00 | .18901088+01 | .16958672+00 | .32639079+01 | .91744227+00 |
| .27445277+00 | .18901830+01 | .16921627+00 | .32783019+01 | .92303184+00 |
| .27488910+00 | .18902580+01 | .16884295+00 | .32928978+01 | .92869228+00 |
| .27532542+00 | .18903338+01 | .16846872+00 | .33077006+01 | .93442532+00 |
| .27576175+00 | .18904104+01 | .16809355+00 | .33227154+01 | .94023266+00 |
| .27619807+00 | .18904877+01 | .16771739+00 | .33379478+01 | .94611624+00 |
| .27663440+00 | .18905658+01 | .16734021+00 | .33534034+01 | .95207793+00 |
| .27707072+00 | .18906448+01 | .16696196+00 | .33690878+01 | .95811967+00 |
| .27750704+00 | .18907246+01 | .16658261+00 | .33850073+01 | .96424355+00 |
| .27794337+00 | .18908052+01 | .16620210+00 | .34011679+01 | .97045165+00 |
| .27837969+00 | .18908866+01 | .16582039+00 | .34175762+01 | .97674619+00 |
| .27881602+00 | .18909690+01 | .16543743+00 | .34342394+01 | .98312958+00 |
| .27925234+00 | .18910522+01 | .16505319+00 | .34511640+01 | .98960408+00 |
| .27968867+00 | .18911363+01 | .16466759+00 | .34683574+01 | .99617217+00 |
| .27993695+00 | .18911846+01 | .16444755+00 | .34782646+01 | .99995260+00 |

$$.38258687+00 = \Delta S/R$$

$$.66452128+01 = P_s/P_{\infty}$$

$$.26731992+01 = \rho_s/\rho_{\infty}$$

$$.24858652+01 = T_s/T_{\infty}$$



99 TABLE 99. CONICAL FLOWFIELD  $\theta_s = 12.5 \text{ DEG}$ ;  $M_\infty = 10.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .95205621+00 | .99999913+01 | .21816615+00 | .27007188+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .21816615+00 | .19040767+01 | .21816615+00 | .22553542+01 | .50000000+00 |
| .21903881+00 | .19040782+01 | .21729688+00 | .22654138+01 | .50430463+00 |
| .21991148+00 | .19040825+01 | .21643426+00 | .22756190+01 | .50866108+00 |
| .22078414+00 | .19040896+01 | .21557805+00 | .22859728+01 | .51307041+00 |
| .22165681+00 | .19040994+01 | .21472804+00 | .22964788+01 | .51753383+00 |
| .22252947+00 | .19041119+01 | .21388403+00 | .23071405+01 | .52205256+00 |
| .22340214+00 | .19041271+01 | .21304580+00 | .23179613+01 | .52662785+00 |
| .22427480+00 | .19041449+01 | .21221316+00 | .23289453+01 | .53126108+00 |
| .22514746+00 | .19041652+01 | .21138592+00 | .23400961+01 | .53595351+00 |
| .22602013+00 | .19041881+01 | .21056388+00 | .23514180+01 | .54070664+00 |
| .22689279+00 | .19042135+01 | .20974685+00 | .23629149+01 | .54552186+00 |
| .22776546+00 | .19042413+01 | .20893466+00 | .23745914+01 | .55040070+00 |
| .22863812+00 | .19042716+01 | .20812713+00 | .23864519+01 | .55534472+00 |
| .22951078+00 | .19043043+01 | .20732407+00 | .23985011+01 | .56035554+00 |
| .23038345+00 | .19043393+01 | .20652533+00 | .24107438+01 | .56543482+00 |
| .23125611+00 | .19043767+01 | .20573073+00 | .24231851+01 | .57058430+00 |
| .23212878+00 | .19044164+01 | .20494010+00 | .24358301+01 | .57580581+00 |
| .23300144+00 | .19044584+01 | .20415327+00 | .24486845+01 | .58110119+00 |
| .23387410+00 | .19045027+01 | .20337010+00 | .24617537+01 | .58647241+00 |
| .23474677+00 | .19045492+01 | .20259041+00 | .24750436+01 | .59192146+00 |
| .23561943+00 | .19045980+01 | .20181406+00 | .24885605+01 | .59745046+00 |
| .23649210+00 | .19046490+01 | .20104087+00 | .25023106+01 | .60306161+00 |
| .23736476+00 | .19047023+01 | .20027070+00 | .25163006+01 | .60875714+00 |
| .23823743+00 | .19047577+01 | .19950338+00 | .25305373+01 | .61453941+00 |
| .23911009+00 | .19048154+01 | .19873878+00 | .25450280+01 | .62041089+00 |
| .23998275+00 | .19048752+01 | .19797672+00 | .25597804+01 | .62637422+00 |
| .24085542+00 | .19049373+01 | .19721707+00 | .25748021+01 | .63243199+00 |
| .24172808+00 | .19050014+01 | .19645966+00 | .25901013+01 | .63858701+00 |
| .24260075+00 | .19050678+01 | .19570434+00 | .26056866+01 | .64484217+00 |
| .24347341+00 | .19051363+01 | .19495096+00 | .26215670+01 | .65120058+00 |
| .24434607+00 | .19052071+01 | .19419936+00 | .26377521+01 | .65766539+00 |
| .24521874+00 | .19052799+01 | .19344939+00 | .26542514+01 | .66423992+00 |
| .24609140+00 | .19053550+01 | .19270089+00 | .26710752+01 | .67092765+00 |
| .24696407+00 | .19054323+01 | .19195371+00 | .26882346+01 | .67773227+00 |
| .24783673+00 | .19055117+01 | .19120268+00 | .27057407+01 | .68465757+00 |
| .24870940+00 | .19055934+01 | .19046264+00 | .27236052+01 | .69170753+00 |
| .24958206+00 | .19056772+01 | .18971843+00 | .27418409+01 | .69888641+00 |
| .25045472+00 | .19057633+01 | .18897489+00 | .27604609+01 | .70619861+00 |
| .25132739+00 | .19058516+01 | .18823183+00 | .27794790+01 | .71364882+00 |
| .25220005+00 | .19059422+01 | .18748910+00 | .27989098+01 | .72124192+00 |



TABLE 99. (Concluded)

$M_{\infty} = .99999913+01$

$\Theta_s = .21816615+00$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .25307272+00 | .19060351+01 | .18674651+00 | .28187686+01 | .72898304+00 |
| .25394538+00 | .19061303+01 | .18600389+00 | .28390719+01 | .73687769+00 |
| .25481804+00 | .19062278+01 | .18526104+00 | .28598365+01 | .74493151+00 |
| .25569069+00 | .19063281+01 | .18451780+00 | .28810803+01 | .75315048+00 |
| .25656334+00 | .19064307+01 | .18377396+00 | .29028231+01 | .76154119+00 |
| .25743599+00 | .19065357+01 | .18302932+00 | .29250850+01 | .77011038+00 |
| .25830864+00 | .19066432+01 | .18228365+00 | .29478877+01 | .77886525+00 |
| .25918129+00 | .19067532+01 | .18153675+00 | .29712541+01 | .78781340+00 |
| .26005394+00 | .19068658+01 | .18078839+00 | .29952088+01 | .79696304+00 |
| .26092626+00 | .19069230+01 | .18004135+00 | .30074148+01 | .80161610+00 |
| .26092659+00 | .19069809+01 | .18003834+00 | .30197775+01 | .80632270+00 |
| .26136291+00 | .19070395+01 | .17966261+00 | .30323006+01 | .81108409+00 |
| .26179924+00 | .19070988+01 | .17928637+00 | .30449877+01 | .81590150+00 |
| .26223556+00 | .19071587+01 | .17890958+00 | .30578429+01 | .82077620+00 |
| .26267189+00 | .19072192+01 | .17853220+00 | .30708696+01 | .82570940+00 |
| .26310821+00 | .19072805+01 | .17815422+00 | .30840722+01 | .83070248+00 |
| .26354454+00 | .19073426+01 | .17777559+00 | .30974545+01 | .83575676+00 |
| .26398086+00 | .19074052+01 | .17739628+00 | .31110211+01 | .84087372+00 |
| .26441719+00 | .19074686+01 | .17701626+00 | .31247763+01 | .84605479+00 |
| .26485351+00 | .19075328+01 | .17663547+00 | .31387246+01 | .85130145+00 |
| .26528984+00 | .19075976+01 | .17625390+00 | .31528712+01 | .85661541+00 |
| .26572616+00 | .19076632+01 | .17587150+00 | .31672206+01 | .86199818+00 |
| .26616248+00 | .19077296+01 | .17548822+00 | .31817783+01 | .86745153+00 |
| .26659881+00 | .19077967+01 | .17510403+00 | .31965495+01 | .87297722+00 |
| .26703513+00 | .19078646+01 | .17471889+00 | .32115399+01 | .87857704+00 |
| .26747146+00 | .19079333+01 | .17433274+00 | .32267549+01 | .88425284+00 |
| .26790778+00 | .19080028+01 | .17394555+00 | .32422010+01 | .89000676+00 |
| .26834411+00 | .19080731+01 | .17355728+00 | .32578841+01 | .89584066+00 |
| .26878043+00 | .19081442+01 | .17316786+00 | .32738107+01 | .90175672+00 |
| .26921676+00 | .19082162+01 | .17277726+00 | .32899875+01 | .90775716+00 |
| .26965308+00 | .19082891+01 | .17238542+00 | .33064221+01 | .91384443+00 |
| .27007188+00 | .19083598+01 | .17200810+00 | .33224454+01 | .91977090+00 |

$.64940313+00 = \Delta S/R$

$.96678960+01 = P_s/P_{\infty}$

$.30086460+01 = \rho_s/\rho_{\infty}$

$.32133711+01 = T_s/T_{\infty}$

TABLE 100. CONICAL FLOWFIELD  $\theta_s = 12.5 \text{ DEG}$ ;  $M_\infty = 12.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .95822624+00 | .12500000+02 | .21816615+00 | .26354123+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .21816615+00 | .19164165+01 | .21816615+00 | .22553542+01 | .50000000+00 |
| .21903881+00 | .19164180+01 | .21729688+00 | .22662510+01 | .50449101+00 |
| .21991148+00 | .19164223+01 | .21643422+00 | .22773179+01 | .50904083+00 |
| .22078414+00 | .19164295+01 | .21557794+00 | .22885586+01 | .51365076+00 |
| .22165661+00 | .19164394+01 | .21472779+00 | .22999776+01 | .51832230+00 |
| .22252947+00 | .19164520+01 | .21388354+00 | .23115793+01 | .52305697+00 |
| .22340214+00 | .19164673+01 | .21304496+00 | .23233685+01 | .52785634+00 |
| .22427480+00 | .19164852+01 | .21221184+00 | .23353499+01 | .53272206+00 |
| .22514746+00 | .19165057+01 | .21138396+00 | .23475287+01 | .53765580+00 |
| .22602013+00 | .19165287+01 | .21056110+00 | .23599100+01 | .54265937+00 |
| .22689279+00 | .19165543+01 | .20974307+00 | .23724992+01 | .54773456+00 |
| .22776546+00 | .19165824+01 | .20892966+00 | .23853020+01 | .55288327+00 |
| .22863812+00 | .19166129+01 | .20812067+00 | .23983243+01 | .55810750+00 |
| .22951078+00 | .19166459+01 | .20731591+00 | .24115723+01 | .56340931+00 |
| .23038345+00 | .19166812+01 | .20651519+00 | .24250523+01 | .56879084+00 |
| .23125611+00 | .19167190+01 | .20571832+00 | .24387710+01 | .57425430+00 |
| .23212878+00 | .19167591+01 | .20492510+00 | .24527353+01 | .57980201+00 |
| .23300144+00 | .19168016+01 | .20413536+00 | .24669525+01 | .58543640+00 |
| .23387410+00 | .19168463+01 | .20334892+00 | .24814301+01 | .59116000+00 |
| .23474677+00 | .19168935+01 | .20256559+00 | .24961760+01 | .59697539+00 |
| .23561943+00 | .19169429+01 | .20178519+00 | .25111985+01 | .60288536+00 |
| .23649210+00 | .19169946+01 | .20100754+00 | .25265062+01 | .60889279+00 |
| .23736476+00 | .19170485+01 | .20023247+00 | .25421082+01 | .61500064+00 |
| .23823743+00 | .19171048+01 | .19945879+00 | .25580138+01 | .62121207+00 |
| .23911009+00 | .19171633+01 | .19868933+00 | .25742330+01 | .62753029+00 |
| .23998275+00 | .19172242+01 | .19792091+00 | .25907763+01 | .63395887+00 |
| .24085542+00 | .19172872+01 | .19715434+00 | .26076545+01 | .64050133+00 |
| .24172808+00 | .19173526+01 | .19638946+00 | .26248790+01 | .64716142+00 |
| .24260075+00 | .19174202+01 | .19562608+00 | .26424619+01 | .65394314+00 |
| .24347341+00 | .19174901+01 | .19486400+00 | .26604159+01 | .66085068+00 |
| .24434607+00 | .19175623+01 | .19410305+00 | .26787542+01 | .66788836+00 |
| .24521874+00 | .19176368+01 | .19334305+00 | .26974907+01 | .67506077+00 |
| .24609140+00 | .19177136+01 | .19258379+00 | .27166405+01 | .68237285+00 |
| .24696407+00 | .19177927+01 | .19182508+00 | .27362190+01 | .68982964+00 |
| .24783673+00 | .19178742+01 | .19106673+00 | .27562427+01 | .69743655+00 |
| .24870940+00 | .19179581+01 | .19030853+00 | .27767292+01 | .70519930+00 |
| .24958206+00 | .19180443+01 | .18955027+00 | .27976968+01 | .71312388+00 |
| .25001839+00 | .19180883+01 | .18917106+00 | .28083671+01 | .71714886+00 |
| .25045472+00 | .19181330+01 | .18879175+00 | .28191651+01 | .72121669+00 |
| .25089105+00 | .19181784+01 | .18841233+00 | .28300931+01 | .72532817+00 |

TABLE 100. (Concluded)

$$M_{\infty} = .12500000+02$$

$$\Theta_s = .21816615+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .25132737+00 | .19182244+01 | .18803275+00 | .26411544+01 | .72948434+00 |
| .25176370+00 | .19182711+01 | .18765300+00 | .28523515+01 | .73368602+00 |
| .25220002+00 | .19183184+01 | .18727304+00 | .28636874+01 | .73793417+00 |
| .25263635+00 | .19183663+01 | .18689285+00 | .28751649+01 | .74222971+00 |
| .25307267+00 | .19184148+01 | .18651240+00 | .28867871+01 | .74657367+00 |
| .25350900+00 | .19184640+01 | .18613164+00 | .28985575+01 | .75096716+00 |
| .25394532+00 | .19185136+01 | .18575056+00 | .29104789+01 | .75541110+00 |
| .25438165+00 | .19185643+01 | .18536913+00 | .29225548+01 | .75990662+00 |
| .25481797+00 | .19186154+01 | .18498730+00 | .29347890+01 | .76445494+00 |
| .25525429+00 | .19186672+01 | .18460504+00 | .29471846+01 | .76905715+00 |
| .25569062+00 | .19187196+01 | .18422233+00 | .29597462+01 | .77371450+00 |
| .25612694+00 | .19187728+01 | .18383913+00 | .29724767+01 | .77842816+00 |
| .25656327+00 | .19188266+01 | .18345540+00 | .29853805+01 | .78319947+00 |
| .25699959+00 | .19188811+01 | .18307111+00 | .29984617+01 | .78802978+00 |
| .25743592+00 | .19189362+01 | .18268622+00 | .30117245+01 | .79292040+00 |
| .25787224+00 | .19189921+01 | .18230069+00 | .30251735+01 | .79787263+00 |
| .25830857+00 | .19190488+01 | .18191449+00 | .30388131+01 | .80288852+00 |
| .25874489+00 | .19191061+01 | .18152757+00 | .30526482+01 | .80796898+00 |
| .25918122+00 | .19191642+01 | .18113889+00 | .30666839+01 | .81311592+00 |
| .25961754+00 | .19192230+01 | .18075143+00 | .30809249+01 | .81833081+00 |
| .26005387+00 | .19192825+01 | .18036212+00 | .30953766+01 | .82361539+00 |
| .26049019+00 | .19193428+01 | .17997192+00 | .31100449+01 | .82897154+00 |
| .26092651+00 | .19194039+01 | .17958880+00 | .31249352+01 | .83440100+00 |
| .26136284+00 | .19194657+01 | .17918671+00 | .31400537+01 | .83990581+00 |
| .26179916+00 | .19195284+01 | .17879559+00 | .31554065+01 | .84548787+00 |
| .26223549+00 | .19195918+01 | .17840139+00 | .31709999+01 | .85114919+00 |
| .26267181+00 | .19196561+01 | .17800608+00 | .31868409+01 | .85689203+00 |
| .26310814+00 | .19197212+01 | .17760959+00 | .32029366+01 | .86271863+00 |
| .26354423+00 | .19197867+01 | .17721482+00 | .32191716+01 | .86858707+00 |

$$.10049974+01 = \Delta S/R$$

$$.14383082+02 = P_s/P_{\infty}$$

$$.33121205+01 = \rho_s/\rho_{\infty}$$

$$.43425601+01 = T_s/T_{\infty}$$



TABLE 101. CONICAL FLOWFIELD  $\theta_s = 12.5 \text{ DEG}$ ;  $M_\infty = 15.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .96164352+00 | .14999993+02 | .21816615+00 | .25991410+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .21816615+00 | .19232510+01 | .21816615+00 | .22553542+01 | .50000000+00 |
| .21903881+00 | .19232524+01 | .21729686+00 | .22667969+01 | .50461254+00 |
| .21991146+00 | .19232568+01 | .21643420+00 | .22784266+01 | .50928865+00 |
| .22078414+00 | .19232640+01 | .21557787+00 | .22902476+01 | .51402985+00 |
| .22165681+00 | .19232739+01 | .21472261+00 | .23022652+01 | .51883785+00 |
| .22252947+00 | .19232865+01 | .21388320+00 | .23144845+01 | .52371435+00 |
| .22340214+00 | .19233019+01 | .21304438+00 | .23269110+01 | .52866117+00 |
| .22427480+00 | .19233199+01 | .21221093+00 | .23395503+01 | .53368022+00 |
| .22514746+00 | .19233404+01 | .21138260+00 | .23524083+01 | .53877340+00 |
| .22602013+00 | .19233636+01 | .21055918+00 | .23654912+01 | .54394276+00 |
| .22689279+00 | .19233893+01 | .20974095+00 | .23788053+01 | .54919044+00 |
| .22776546+00 | .19234175+01 | .20892619+00 | .23923573+01 | .55451861+00 |
| .22863812+00 | .19234482+01 | .20811620+00 | .24061541+01 | .55992956+00 |
| .22951078+00 | .19234813+01 | .20731825+00 | .24202031+01 | .56542572+00 |
| .23038345+00 | .19235169+01 | .20650814+00 | .24345118+01 | .57100953+00 |
| .23125611+00 | .19235548+01 | .20570968+00 | .24490880+01 | .57668363+00 |
| .23212878+00 | .19235952+01 | .20491467+00 | .24639401+01 | .58245071+00 |
| .23300144+00 | .19236379+01 | .20412289+00 | .24790767+01 | .58831362+00 |
| .23387410+00 | .19236830+01 | .20333415+00 | .24945069+01 | .59427533+00 |
| .23474677+00 | .19237305+01 | .20254827+00 | .25102401+01 | .60033890+00 |
| .23561943+00 | .19237803+01 | .20176503+00 | .25262863+01 | .60650763+00 |
| .23649210+00 | .19238324+01 | .20098425+00 | .25426561+01 | .61278494+00 |
| .23736476+00 | .19238869+01 | .20020573+00 | .25593601+01 | .61917432+00 |
| .23823743+00 | .19239436+01 | .19942927+00 | .25764101+01 | .62567959+00 |
| .23911009+00 | .19240027+01 | .19865468+00 | .25938180+01 | .63230460+00 |
| .23998442+00 | .19240632+01 | .19826802+00 | .26026603+01 | .63566338+00 |
| .23998275+00 | .19240642+01 | .19788176+00 | .26115967+01 | .63905364+00 |
| .24041909+00 | .19240958+01 | .19749586+00 | .26206294+01 | .64247594+00 |
| .24085542+00 | .19241280+01 | .19711030+00 | .26297597+01 | .64593087+00 |
| .24129175+00 | .19241607+01 | .19672506+00 | .26389895+01 | .64941902+00 |
| .24172808+00 | .19241941+01 | .19634011+00 | .26483208+01 | .65294097+00 |
| .24216441+00 | .19242280+01 | .19595543+00 | .26577553+01 | .65649731+00 |
| .24260075+00 | .19242625+01 | .19557098+00 | .26672949+01 | .66008870+00 |
| .24303708+00 | .19242976+01 | .19518675+00 | .26769419+01 | .66371579+00 |
| .24347341+00 | .19243333+01 | .19480271+00 | .26866981+01 | .66737922+00 |
| .24390974+00 | .19243696+01 | .19441883+00 | .26965656+01 | .67107965+00 |
| .24434607+00 | .19244065+01 | .19403508+00 | .27065467+01 | .67481781+00 |
| .24478241+00 | .19244440+01 | .19365145+00 | .27166435+01 | .67859442+00 |
| .24521874+00 | .19244821+01 | .19326789+00 | .27268584+01 | .68241021+00 |
| .24565507+00 | .19245206+01 | .19288438+00 | .27371937+01 | .68626593+00 |

TABLE 101. (Concluded)

$$M_{\infty} = .14999993+02$$

$$\Theta_s = .21816615+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .24609140+00 | .19245601+01 | .19250090+00 | .27476516+01 | .69016234+00 |
| .24652774+00 | .19246000+01 | .19211741+00 | .27582353+01 | .69410033+00 |
| .24696407+00 | .19246405+01 | .19173339+00 | .27689467+01 | .69808066+00 |
| .24740040+00 | .19246818+01 | .19135031+00 | .27797886+01 | .70210415+00 |
| .24783673+00 | .19247233+01 | .19096665+00 | .27907639+01 | .70617174+00 |
| .24827306+00 | .19247659+01 | .19058286+00 | .28018751+01 | .71028428+00 |
| .24870938+00 | .19248091+01 | .19019893+00 | .28131255+01 | .71444275+00 |
| .24914571+00 | .19248528+01 | .18981481+00 | .28245179+01 | .71864808+00 |
| .24958203+00 | .19248973+01 | .18943048+00 | .28360555+01 | .72290130+00 |
| .25001835+00 | .19249424+01 | .18904590+00 | .28477415+01 | .72720345+00 |
| .25045468+00 | .19249881+01 | .18866105+00 | .28595791+01 | .73155553+00 |
| .25089100+00 | .19250344+01 | .18827588+00 | .28715720+01 | .73595873+00 |
| .25132733+00 | .19250815+01 | .18789038+00 | .28837233+01 | .74041402+00 |
| .25176365+00 | .19251291+01 | .18750450+00 | .28960371+01 | .74492275+00 |
| .25219998+00 | .19251776+01 | .18711820+00 | .29085169+01 | .74948598+00 |
| .25263630+00 | .19252265+01 | .18673146+00 | .29211666+01 | .75410500+00 |
| .25307263+00 | .19252762+01 | .18634424+00 | .29339903+01 | .75878110+00 |
| .25350895+00 | .19253266+01 | .18595649+00 | .29469924+01 | .76351568+00 |
| .25394528+00 | .19253777+01 | .18556819+00 | .29601770+01 | .76831005+00 |
| .25438160+00 | .19254295+01 | .18517929+00 | .29735488+01 | .77316566+00 |
| .25481793+00 | .19254819+01 | .18478974+00 | .29871122+01 | .77808397+00 |
| .25525425+00 | .19255351+01 | .18439952+00 | .30008722+01 | .78306653+00 |
| .25569057+00 | .19255891+01 | .18400856+00 | .30148338+01 | .78811495+00 |
| .25612690+00 | .19256437+01 | .18361685+00 | .30290023+01 | .79323087+00 |
| .25656322+00 | .19256991+01 | .18322433+00 | .30433829+01 | .79841597+00 |
| .25699955+00 | .19257553+01 | .18283096+00 | .30579813+01 | .80367205+00 |
| .25743587+00 | .19258122+01 | .18243667+00 | .30728035+01 | .80900101+00 |
| .25787220+00 | .19258699+01 | .18204144+00 | .30878555+01 | .81440473+00 |
| .25830852+00 | .19259284+01 | .18164521+00 | .31031435+01 | .81988516+00 |
| .25874485+00 | .19259876+01 | .18124793+00 | .31186743+01 | .82544450+00 |
| .25918117+00 | .19260478+01 | .18084954+00 | .31344546+01 | .83108480+00 |
| .25961750+00 | .19261087+01 | .18045000+00 | .31504918+01 | .83680847+00 |
| .25991410+00 | .19261505+01 | .18017778+00 | .31615441+01 | .84074806+00 |

$$.13563991+01 = \Delta S/R$$

$$.20141879+02 = P_g/P_{\infty}$$

$$.35221401+01 = \rho_g/\rho_{\infty}$$

$$.57186480+01 = T_g/T_{\infty}$$

TABLE 102. CONICAL FLOWFIELD  $\theta_s = 12.5 \text{ DEG}$ ;  $M_\infty = 17.5$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .96372730+00 | .17500004+02 | .21816615+00 | .25769789+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .21816615+00 | .19274185+01 | .21816615+00 | .22553542+01 | .50000000+00 |
| .21903681+00 | .19274199+01 | .21729687+00 | .22671661+01 | .50469472+00 |
| .21991148+00 | .19274243+01 | .21643419+00 | .22791769+01 | .50945637+00 |
| .22078414+00 | .19274315+01 | .21557781+00 | .22913919+01 | .51428656+00 |
| .22165681+00 | .19274414+01 | .21472749+00 | .23038153+01 | .51918717+00 |
| .22252947+00 | .19274541+01 | .21388296+00 | .23164544+01 | .52416008+00 |
| .22340214+00 | .19274695+01 | .21304397+00 | .23293146+01 | .52920725+00 |
| .22427480+00 | .19274876+01 | .21221026+00 | .23424022+01 | .53433078+00 |
| .22514746+00 | .19275082+01 | .21138164+00 | .23557235+01 | .53953274+00 |
| .22602013+00 | .19275314+01 | .21055783+00 | .23692862+01 | .54461544+00 |
| .22689279+00 | .19275572+01 | .20973861+00 | .23830964+01 | .55018112+00 |
| .22776546+00 | .19275855+01 | .20892375+00 | .23971619+01 | .55563226+00 |
| .22863812+00 | .19276163+01 | .20811304+00 | .24114903+01 | .56117134+00 |
| .22951076+00 | .19276495+01 | .20730626+00 | .24260899+01 | .56680103+00 |
| .23038345+00 | .19276852+01 | .20650318+00 | .24409690+01 | .57252408+00 |
| .23125611+00 | .19277233+01 | .20570360+00 | .24561366+01 | .57834335+00 |
| .23212878+00 | .19277638+01 | .20490731+00 | .24716018+01 | .58426186+00 |
| .23300144+00 | .19278068+01 | .20411409+00 | .24873746+01 | .59028261+00 |
| .23387410+00 | .19278521+01 | .20332374+00 | .25034650+01 | .59640944+00 |
| .23474677+00 | .19278998+01 | .20253604+00 | .25198837+01 | .60264523+00 |
| .23561943+00 | .19279499+01 | .20175060+00 | .25366420+01 | .60899382+00 |
| .23649210+00 | .19280023+01 | .20096779+00 | .25537518+01 | .61545903+00 |
| .23736476+00 | .19280570+01 | .20018662+00 | .25712255+01 | .62204485+00 |
| .23823743+00 | .19281142+01 | .19940768+00 | .25890761+01 | .62875551+00 |
| .23911009+00 | .19281737+01 | .19863014+00 | .26073175+01 | .63559541+00 |
| .23998275+00 | .19282355+01 | .19785401+00 | .26259643+01 | .64256932+00 |
| .24085542+00 | .19282998+01 | .19707906+00 | .26450316+01 | .64968202+00 |
| .24172808+00 | .19283328+01 | .19669196+00 | .26645360+01 | .65693881+00 |
| .24260075+00 | .19283664+01 | .19630508+00 | .26844943+01 | .66434512+00 |
| .24347341+00 | .19284006+01 | .19591836+00 | .26744573+01 | .66810616+00 |
| .24434607+00 | .19284354+01 | .19553185+00 | .26744573+01 | .67190681+00 |
| .24521874+00 | .19284706+01 | .19514544+00 | .26946475+01 | .67574780+00 |
| .24609140+00 | .19285069+01 | .19475913+00 | .27049250+01 | .67962995+00 |
| .24696406+00 | .19285435+01 | .19437289+00 | .27153234+01 | .68355410+00 |
| .24783672+00 | .19285807+01 | .19398670+00 | .27258471+01 | .68752110+00 |
| .24870938+00 | .19286186+01 | .19360052+00 | .27364988+01 | .69153183+00 |
| .24958204+00 | .19286571+01 | .19321433+00 | .27472812+01 |              |
| .25045470+00 | .19286961+01 | .19282809+00 | .27581969+01 |              |



TABLE 102. (Concluded)

$$M_{\infty} = .17500004 + 02$$

$$\Theta_s = .21816615 + 00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .24609140+00 | .19287359+01 | .19244177+00 | .27692490+01 | .69558720+00 |
| .24652773+00 | .19287764+01 | .19205534+00 | .27804402+01 | .69968808+00 |
| .24696405+00 | .19288175+01 | .19166878+00 | .27917734+01 | .70383544+00 |
| .24740038+00 | .19288593+01 | .19128204+00 | .28032520+01 | .70803034+00 |
| .24783670+00 | .19289017+01 | .19089510+00 | .28148791+01 | .71227374+00 |
| .24827303+00 | .19289448+01 | .19050792+00 | .28266582+01 | .71656676+00 |
| .24870935+00 | .19289885+01 | .19012046+00 | .28385925+01 | .72091044+00 |
| .24914568+00 | .19290329+01 | .18973270+00 | .28506857+01 | .72530591+00 |
| .24958200+00 | .19290779+01 | .18934459+00 | .28629415+01 | .72975437+00 |
| .25001832+00 | .19291236+01 | .18895611+00 | .28753637+01 | .73425700+00 |
| .25045465+00 | .19291700+01 | .18856721+00 | .28879562+01 | .73881505+00 |
| .25089097+00 | .19292170+01 | .18817786+00 | .29007231+01 | .74342980+00 |
| .25132730+00 | .19292647+01 | .18778802+00 | .29136685+01 | .74810256+00 |
| .25176362+00 | .19293131+01 | .18739765+00 | .29267972+01 | .75283480+00 |
| .25219995+00 | .19293623+01 | .18700672+00 | .29401131+01 | .75762781+00 |
| .25263627+00 | .19294121+01 | .18661517+00 | .29536214+01 | .76248319+00 |
| .25307260+00 | .19294626+01 | .18622297+00 | .29673269+01 | .76740246+00 |
| .25350892+00 | .19295139+01 | .18583008+00 | .29812344+01 | .77238711+00 |
| .25394525+00 | .19295658+01 | .18543644+00 | .29953495+01 | .77743890+00 |
| .25438157+00 | .19296186+01 | .18504202+00 | .30096777+01 | .78255962+00 |
| .25481790+00 | .19296720+01 | .18464677+00 | .30242241+01 | .78775080+00 |
| .25525422+00 | .19297263+01 | .18425064+00 | .30389953+01 | .79301451+00 |
| .25569054+00 | .19297813+01 | .18385358+00 | .30539967+01 | .79835252+00 |
| .25612687+00 | .19298370+01 | .18345554+00 | .30692356+01 | .80376702+00 |
| .25656319+00 | .19298937+01 | .18305647+00 | .30847181+01 | .80925997+00 |
| .25699952+00 | .19299510+01 | .18265631+00 | .31004512+01 | .81483352+00 |
| .25743584+00 | .19300092+01 | .18225501+00 | .31164422+01 | .82049001+00 |
| .25787217+00 | .19300684+01 | .18201344+00 | .31261713+01 | .82392802+00 |

$$.16903721+01 = \Delta S/R$$

$$.26945949+02 = P_s/P_{\infty}$$

$$.36596312+01 = \rho_s/\rho_{\infty}$$

$$.73429565+01 = T_s/T_{\infty}$$



TABLE 103. CONICAL FLOWFIELD  $\theta_s = 12.5 \text{ DEG}$ ;  $M_\infty = 20.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .96508955+00 | .19999960+02 | .21816615+00 | .25624724+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .21816615+00 | .19301429+01 | .21816615+00 | .22553542+01 | .50000000+00 |
| .21903681+00 | .19301444+01 | .21729687+00 | .22674247+01 | .50475229+00 |
| .21991148+00 | .19301487+01 | .21643418+00 | .22797025+01 | .50957386+00 |
| .22078414+00 | .19301559+01 | .21557778+00 | .22921931+01 | .51446652+00 |
| .22165681+00 | .19301659+01 | .21472740+00 | .23049024+01 | .51943217+00 |
| .22252947+00 | .19301786+01 | .21388279+00 | .23178366+01 | .52447285+00 |
| .22340214+00 | .19301940+01 | .21304368+00 | .23310020+01 | .52959062+00 |
| .22427480+00 | .19302121+01 | .21220982+00 | .23444054+01 | .53478772+00 |
| .22514746+00 | .19302328+01 | .21138096+00 | .23580538+01 | .54006638+00 |
| .22602013+00 | .19302560+01 | .21055666+00 | .23719544+01 | .54542899+00 |
| .22689279+00 | .19302818+01 | .20973728+00 | .23861149+01 | .55087800+00 |
| .22776546+00 | .19303102+01 | .20892200+00 | .24005434+01 | .55641605+00 |
| .22863812+00 | .19303411+01 | .20811078+00 | .24152480+01 | .56204578+00 |
| .22951078+00 | .19303744+01 | .20730339+00 | .24302377+01 | .56777007+00 |
| .23038345+00 | .19304101+01 | .20649961+00 | .24455214+01 | .57359194+00 |
| .23125611+00 | .19304484+01 | .20569923+00 | .24611086+01 | .57951915+00 |
| .23212878+00 | .19304890+01 | .20490201+00 | .24770099+01 | .58555402+00 |
| .23300144+00 | .19305321+01 | .20410775+00 | .24932353+01 | .59167363+00 |
| .23387410+00 | .19305775+01 | .20331623+00 | .25097961+01 | .59791773+00 |
| .23474677+00 | .19306254+01 | .20252723+00 | .25267039+01 | .60427631+00 |
| .23561943+00 | .19306756+01 | .20174053+00 | .25439708+01 | .61075330+00 |
| .23649210+00 | .19307282+01 | .20095592+00 | .25616099+01 | .61735285+00 |
| .23736476+00 | .19307832+01 | .20017317+00 | .25796347+01 | .62407926+00 |
| .23823743+00 | .19308406+01 | .19939208+00 | .25980594+01 | .63093711+00 |
| .23911009+00 | .19309004+01 | .19861291+00 | .26168993+01 | .63793121+00 |
| .23998275+00 | .19309625+01 | .19783395+00 | .26264799+01 | .64148098+00 |
| .24085542+00 | .19310271+01 | .19705646+00 | .26361704+01 | .64506675+00 |
| .24172808+00 | .19310941+01 | .19627972+00 | .26459728+01 | .64868914+00 |
| .24260075+00 | .19311635+01 | .19550349+00 | .26558894+01 | .65234895+00 |
| .24347341+00 | .19312354+01 | .19472754+00 | .26659224+01 | .65604682+00 |
| .24434607+00 | .19313097+01 | .19395161+00 | .26760743+01 | .65978356+00 |
| .24521874+00 | .19313866+01 | .19317545+00 | .26863472+01 | .66355987+00 |
| .24609140+00 | .19314662+01 | .19240000+00 | .26967439+01 | .66737657+00 |
| .24696406+00 | .19315484+01 | .19162522+00 | .27072668+01 | .67123448+00 |
| .24783672+00 | .19316332+01 | .19085111+00 | .27179185+01 | .67513441+00 |
| .24870938+00 | .19317206+01 | .19007766+00 | .27287017+01 | .67907716+00 |
| .24958204+00 | .19318106+01 | .18930486+00 | .27396192+01 | .68306372+00 |
| .25045470+00 | .19319032+01 | .18853269+00 | .27506739+01 | .68709492+00 |
| .25132736+00 | .19320000+01 | .18776115+00 | .27618688+01 | .69117174+00 |
| .25220002+00 | .19321000+01 | .18699022+00 | .27732068+01 | .69529506+00 |

TABLE 103. (Concluded)

$$M_{\infty} = .19999960+02$$

$$\Theta_s = .21816615+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .24609139+00 | .19314663+01 | .19239882+00 | .27846911+01 | .69946595+00 |
| .24652771+00 | .19315072+01 | .19201025+00 | .27963251+01 | .70368542+00 |
| .24696404+00 | .19315487+01 | .19162145+00 | .28081122+01 | .70795459+00 |
| .24740036+00 | .19315908+01 | .19123239+00 | .28200560+01 | .71227454+00 |
| .24783669+00 | .19316336+01 | .19084304+00 | .28321600+01 | .71664643+00 |
| .24827301+00 | .19316770+01 | .19045336+00 | .28444276+01 | .72107137+00 |
| .24870934+00 | .19317211+01 | .19006332+00 | .28568635+01 | .72555064+00 |
| .24914566+00 | .19317659+01 | .18967286+00 | .28694709+01 | .73008543+00 |
| .24958199+00 | .19318113+01 | .18928199+00 | .28822543+01 | .73467709+00 |
| .25001831+00 | .19318575+01 | .18889063+00 | .28952178+01 | .73932693+00 |
| .25045463+00 | .19319043+01 | .18849875+00 | .29083662+01 | .74403644+00 |
| .25089096+00 | .19319519+01 | .18810631+00 | .29217037+01 | .74880690+00 |
| .25132728+00 | .19320001+01 | .18771326+00 | .29352352+01 | .75363990+00 |
| .25176361+00 | .19320491+01 | .18731957+00 | .29489661+01 | .75853707+00 |
| .25219993+00 | .19320987+01 | .18692619+00 | .29629009+01 | .76349989+00 |
| .25263626+00 | .19321491+01 | .18653006+00 | .29770454+01 | .76853008+00 |
| .25307258+00 | .19322003+01 | .18613419+00 | .29914051+01 | .77362944+00 |
| .25350891+00 | .19322522+01 | .18573746+00 | .30059855+01 | .77879965+00 |
| .25394523+00 | .19323049+01 | .18533967+00 | .30207931+01 | .78404272+00 |
| .25438156+00 | .19323583+01 | .18494134+00 | .30358337+01 | .78936050+00 |
| .25481788+00 | .19324125+01 | .18454183+00 | .30511141+01 | .79475506+00 |
| .25525421+00 | .19324675+01 | .18414129+00 | .30666410+01 | .80022852+00 |
| .25569053+00 | .19325233+01 | .18373966+00 | .30824214+01 | .80578303+00 |
| .25612685+00 | .19325799+01 | .18333689+00 | .30984629+01 | .81142096+00 |
| .25624724+00 | .19325957+01 | .18322555+00 | .31029359+01 | .81299152+00 |

$$.20027010+01 = \Delta S/R$$

$$.34795166+02 = P_s/P_{\infty}$$

$$.37755273+01 = \rho_s/\rho_{\infty}$$

$$.92159755+01 = T_s/T_{\infty}$$

TABLE 104. CONICAL FLOWFIELD  $\theta_s = 12.5 \text{ DEG}$ ;  $M_\infty = 22.5$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .96602790+00 | .22499886+02 | .21816615+00 | .25524693+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .21816615+00 | .19320196+01 | .21916615+00 | .22553542+01 | .50000000+00 |
| .21903381+00 | .19320211+01 | .21729687+00 | .22676117+01 | .50479390+00 |
| .21991148+00 | .19320254+01 | .21643817+00 | .22800828+01 | .50965887+00 |
| .22078414+00 | .19320326+01 | .21557775+00 | .22927732+01 | .51459670+00 |
| .22165681+00 | .19320426+01 | .21472734+00 | .23056891+01 | .51960946+00 |
| .22252947+00 | .19320553+01 | .21388266+00 | .23188371+01 | .52469924+00 |
| .22340214+00 | .19320707+01 | .21304346+00 | .23322237+01 | .52986820+00 |
| .22427480+00 | .19320888+01 | .21220946+00 | .23458562+01 | .53511866+00 |
| .22514746+00 | .19321095+01 | .21138045+00 | .23597418+01 | .54045298+00 |
| .22602013+00 | .19321328+01 | .21055614+00 | .23738882+01 | .54587365+00 |
| .22689279+00 | .19321587+01 | .20973631+00 | .23883034+01 | .55138324+00 |
| .22776546+00 | .19321871+01 | .20892071+00 | .24029959+01 | .55698451+00 |
| .22863812+00 | .19322180+01 | .20810911+00 | .24179745+01 | .56268024+00 |
| .22951078+00 | .19322513+01 | .20730127+00 | .24332483+01 | .56847343+00 |
| .23038345+00 | .19322872+01 | .20649698+00 | .24488271+01 | .57435717+00 |
| .23125611+00 | .19323255+01 | .20569600+00 | .24647209+01 | .58036469+00 |
| .23212878+00 | .19323662+01 | .20489811+00 | .24809403+01 | .58646940+00 |
| .23300144+00 | .19324093+01 | .20410308+00 | .24974966+01 | .59268489+00 |
| .23387410+00 | .19324549+01 | .20331070+00 | .25144016+01 | .59901491+00 |
| .23474677+00 | .19325028+01 | .20252073+00 | .25316674+01 | .60546336+00 |
| .23561943+00 | .19325532+01 | .20173296+00 | .25493072+01 | .61203445+00 |
| .23649210+00 | .19326060+01 | .20094715+00 | .25673347+01 | .61873252+00 |
| .23736476+00 | .19326611+01 | .20016310+00 | .25857641+01 | .62556212+00 |
| .23823743+00 | .19327187+01 | .19938056+00 | .26046109+01 | .63252813+00 |
| .23911009+00 | .19327787+01 | .19859931+00 | .26238911+01 | .63963564+00 |
| .23998275+00 | .19328095+01 | .19820910+00 | .26336993+01 | .64324421+00 |
| .24085542+00 | .19328410+01 | .19781912+00 | .26436222+01 | .64689019+00 |
| .24172808+00 | .19328731+01 | .19742935+00 | .26536623+01 | .65057430+00 |
| .24260075+00 | .19329059+01 | .19703975+00 | .26638218+01 | .65429732+00 |
| .24347341+00 | .19329392+01 | .19665030+00 | .26741032+01 | .65806000+00 |
| .24434607+00 | .19329731+01 | .19626096+00 | .26845091+01 | .66186316+00 |
| .24521872+00 | .19330077+01 | .19587171+00 | .26950420+01 | .66570757+00 |
| .24609138+00 | .19330428+01 | .19548251+00 | .27057045+01 | .66959409+00 |
| .24696404+00 | .19330786+01 | .19509333+00 | .27164994+01 | .67352360+00 |
| .24783670+00 | .19331150+01 | .19470415+00 | .27274297+01 | .67749699+00 |
| .24870936+00 | .19331521+01 | .19431492+00 | .27384979+01 | .68151512+00 |
| .24958202+00 | .19331898+01 | .19392561+00 | .27497074+01 | .68557899+00 |
| .25045468+00 | .19332283+01 | .19353620+00 | .27610609+01 | .68968948+00 |
| .25132734+00 | .19332674+01 | .19314665+00 | .27725619+01 | .69384769+00 |
| .25220000+00 | .19333071+01 | .19275692+00 | .27842136+01 | .69805463+00 |



TABLE 104. (Concluded)

$$M_{\infty} = .22499886+02$$

$$\Theta_s = .21816615+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .24609137+00 | .19333475+01 | .19236698+00 | .27960196+01 | .70231142+00 |
| .24652770+00 | .19333886+01 | .19197679+00 | .28079833+01 | .70661912+00 |
| .24696402+00 | .19334303+01 | .19158632+00 | .28201085+01 | .71097893+00 |
| .24740035+00 | .19334727+01 | .19119553+00 | .28323989+01 | .71539202+00 |
| .24783667+00 | .19335158+01 | .19080438+00 | .28448584+01 | .71985960+00 |
| .24827300+00 | .19335595+01 | .19041284+00 | .28574910+01 | .72438291+00 |
| .24870932+00 | .19336039+01 | .19002086+00 | .28703011+01 | .72896329+00 |
| .24914565+00 | .19336490+01 | .18962841+00 | .28832930+01 | .73360218+00 |
| .24958197+00 | .19336948+01 | .18923544+00 | .28964711+01 | .73830088+00 |
| .25001829+00 | .19337412+01 | .18884192+00 | .29098402+01 | .74306388+00 |
| .25045462+00 | .19337884+01 | .18844780+00 | .29234049+01 | .74788367+00 |
| .25089094+00 | .19338363+01 | .18805303+00 | .29371707+01 | .75277092+00 |
| .25132727+00 | .19338850+01 | .18765758+00 | .29511423+01 | .75772410+00 |
| .25176359+00 | .19339343+01 | .18726139+00 | .29653255+01 | .76274501+00 |
| .25219992+00 | .19339844+01 | .18686442+00 | .29797260+01 | .76783543+00 |
| .25263624+00 | .19340353+01 | .18646663+00 | .29943495+01 | .77299713+00 |
| .25307257+00 | .19340869+01 | .18606795+00 | .30092023+01 | .77823205+00 |
| .25350889+00 | .19341392+01 | .18566835+00 | .30242905+01 | .78354213+00 |
| .25394522+00 | .19341924+01 | .18526775+00 | .30396209+01 | .78892940+00 |
| .25438154+00 | .19342463+01 | .18486612+00 | .30552007+01 | .79439615+00 |
| .25481787+00 | .19343011+01 | .18446340+00 | .30710367+01 | .79994445+00 |
| .25524693+00 | .19343567+01 | .18406625+00 | .30868664+01 | .80548227+00 |

$$.22931036+01 = \Delta S/R$$

$$.43690427+02 = P_s/P_{\infty}$$

$$.38534279+01 = \rho_s/\rho_{\infty}$$

$$.11338068+02 = T_s/T_{\infty}$$

TABLE 105. CONICAL FLOWFIELD  $\theta_s = 12.5 \text{ DEG}$ ;  $M_\infty = 25.0$ 

| $\underline{u_s}$    | $\underline{M_\infty}$ | $\underline{\theta_s}$ | $\underline{\theta_w}$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .96670146+00         | .24999854+02           | .21816615+00           | .25452847+00           |                 |
| $\underline{\theta}$ | $\underline{M_1^*}$    | $\underline{\psi_1}$   | $\underline{x}$        | $\underline{r}$ |
| .21816615+00         | .19333667+01           | .21816615+00           | .22553542+01           | .50000000+00    |
| .21903881+00         | .19333681+01           | .21729687+00           | .22677506+01           | .50482482+00    |
| .21991148+00         | .19333725+01           | .21643416+00           | .22803653+01           | .50972201+00    |
| .22078414+00         | .19333797+01           | .21557773+00           | .22932043+01           | .51469345+00    |
| .22165681+00         | .19333897+01           | .21472729+00           | .23062740+01           | .51974127+00    |
| .22252947+00         | .19334024+01           | .21388257+00           | .23195811+01           | .52486758+00    |
| .22340214+00         | .19334179+01           | .21304330+00           | .23331326+01           | .53007468+00    |
| .22427480+00         | .19334360+01           | .21220922+00           | .23469358+01           | .53536493+00    |
| .22514746+00         | .19334567+01           | .21138007+00           | .23609982+01           | .54074074+00    |
| .22602013+00         | .19334800+01           | .21055561+00           | .23753279+01           | .54620472+00    |
| .22689279+00         | .19335059+01           | .20973557+00           | .23899333+01           | .55175954+00    |
| .22776546+00         | .19335343+01           | .20891973+00           | .24048230+01           | .55740801+00    |
| .22863812+00         | .19335652+01           | .20810785+00           | .24200062+01           | .56315306+00    |
| .22907445+00         | .19335816+01           | .20770331+00           | .24277109+01           | .56606275+00    |
| .22951078+00         | .19335986+01           | .20729968+00           | .24354925+01           | .56899775+00    |
| .22994712+00         | .19336163+01           | .20689692+00           | .24433525+01           | .57195846+00    |
| .23038345+00         | .19336345+01           | .20649500+00           | .24512919+01           | .57494529+00    |
| .23081978+00         | .19336534+01           | .20609389+00           | .24593123+01           | .57795867+00    |
| .23125611+00         | .19336729+01           | .20569357+00           | .24674150+01           | .58099906+00    |
| .23169244+00         | .19336929+01           | .20529401+00           | .24756013+01           | .58406689+00    |
| .23212878+00         | .19337136+01           | .20489517+00           | .24838728+01           | .58716261+00    |
| .23256511+00         | .19337349+01           | .20449703+00           | .24922308+01           | .59028669+00    |
| .23300144+00         | .19337568+01           | .20409956+00           | .25006770+01           | .59343963+00    |
| .23343777+00         | .19337794+01           | .20370274+00           | .25092128+01           | .59662189+00    |
| .23387410+00         | .19338025+01           | .20330652+00           | .25178400+01           | .59983405+00    |
| .23431044+00         | .19338262+01           | .20291090+00           | .25265599+01           | .60307652+00    |
| .23474677+00         | .19338505+01           | .20251583+00           | .25353744+01           | .60634993+00    |
| .23518310+00         | .19338754+01           | .20212129+00           | .25442852+01           | .60965478+00    |
| .23561943+00         | .19339010+01           | .20172724+00           | .25532941+01           | .61299162+00    |
| .23605577+00         | .19339271+01           | .20133367+00           | .25624028+01           | .61636105+00    |
| .23649210+00         | .19339538+01           | .20094054+00           | .25716133+01           | .61976368+00    |
| .23692843+00         | .19339812+01           | .20054783+00           | .25809273+01           | .62320003+00    |
| .23736476+00         | .19340091+01           | .20015549+00           | .25903470+01           | .62667084+00    |
| .23780109+00         | .19340376+01           | .19976352+00           | .25998743+01           | .63017668+00    |
| .23823743+00         | .19340668+01           | .19937187+00           | .26095114+01           | .63371822+00    |
| .23867376+00         | .19340965+01           | .19898051+00           | .26192604+01           | .63729616+00    |
| .23911009+00         | .19341269+01           | .19858942+00           | .26291234+01           | .64091115+00    |
| .23954642+00         | .19341579+01           | .19819857+00           | .26391030+01           | .64456399+00    |
| .23998275+00         | .19341894+01           | .19780792+00           | .26492011+01           | .64825533+00    |
| .24041909+00         | .19342216+01           | .19741745+00           | .26594203+01           | .65198595+00    |



TABLE 105. (Concluded)

$$M_{\infty} = .24999854+02$$

$$\Theta_s = .21816615+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .24085542+00 | .19342544+01 | .19702713+00 | .26697631+01 | .65575665+00 |
| .24129175+00 | .19342879+01 | .19663692+00 | .26602320+01 | .65956621+00 |
| .24172808+00 | .19343219+01 | .19624679+00 | .26908297+01 | .66342150+00 |
| .24216441+00 | .19343566+01 | .19585671+00 | .27015589+01 | .66731733+00 |
| .24260075+00 | .19343918+01 | .19546665+00 | .27124223+01 | .67125658+00 |
| .24303708+00 | .19344278+01 | .19507658+00 | .27234229+01 | .67524019+00 |
| .24347341+00 | .19344643+01 | .19468646+00 | .27345638+01 | .67926911+00 |
| .24390974+00 | .19345015+01 | .19429626+00 | .27458478+01 | .68334424+00 |
| .24434607+00 | .19345395+01 | .19390694+00 | .27572780+01 | .68746652+00 |
| .24478239+00 | .19345781+01 | .19351549+00 | .27688580+01 | .69163711+00 |
| .24521872+00 | .19346174+01 | .19312484+00 | .27805910+01 | .69585699+00 |
| .24565504+00 | .19346573+01 | .19273398+00 | .27924809+01 | .70012737+00 |
| .24609137+00 | .19346979+01 | .19234286+00 | .28045308+01 | .70444925+00 |
| .24652769+00 | .19347391+01 | .19195144+00 | .28167448+01 | .70882391+00 |
| .24696402+00 | .19347810+01 | .19155970+00 | .28291268+01 | .71325252+00 |
| .24740034+00 | .19348236+01 | .19116759+00 | .28416805+01 | .71773629+00 |
| .24783666+00 | .19348668+01 | .19077568+00 | .28544104+01 | .72227661+00 |
| .24827299+00 | .19349108+01 | .19038211+00 | .28673207+01 | .72687474+00 |
| .24870931+00 | .19349554+01 | .18998866+00 | .28804157+01 | .73153206+00 |
| .24914564+00 | .19350007+01 | .18959467+00 | .28937003+01 | .73625010+00 |
| .24958196+00 | .19350467+01 | .18920012+00 | .29071794+01 | .74103035+00 |
| .25001829+00 | .19350935+01 | .18880494+00 | .29208575+01 | .74587424+00 |
| .25045461+00 | .19351409+01 | .18840911+00 | .29347403+01 | .75078354+00 |
| .25089094+00 | .19351891+01 | .18801257+00 | .29488330+01 | .75575964+00 |
| .25132726+00 | .19352380+01 | .18761527+00 | .29631411+01 | .76080484+00 |
| .25176359+00 | .19352877+01 | .18721717+00 | .29776705+01 | .76592039+00 |
| .25219991+00 | .19353381+01 | .18681822+00 | .29924273+01 | .77110834+00 |
| .25263624+00 | .19353893+01 | .18641837+00 | .30074178+01 | .77637073+00 |
| .25307256+00 | .19354412+01 | .18601756+00 | .30226487+01 | .78170951+00 |
| .25350888+00 | .19354940+01 | .18561574+00 | .30381265+01 | .78712676+00 |
| .25394521+00 | .19355475+01 | .18521285+00 | .30538586+01 | .79262476+00 |
| .25438153+00 | .19356019+01 | .18480884+00 | .30698526+01 | .79820583+00 |
| .25481787+00 | .19356574+01 | .18440725+00 | .30752991+01 | .80010445+00 |

$$.25628707+01 = \Delta S/R$$

$$.53631537+02 = P_s/P_{\infty}$$

$$.39120266+01 = \rho_s/\rho_{\infty}$$

$$.13709400+02 = T_s/T_{\infty}$$



TABLE 106. CONICAL FLOWFIELD  $\theta_s = 12.5 \text{ DEG}$ ;  $M_\infty = 27.5$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .96720103+00 | .27500205+02 | .21816615+00 | .25399524+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .21816615+00 | .19343658+01 | .21816615+00 | .22553542+01 | .50000000+00 |
| .21903881+00 | .19343673+01 | .21729687+00 | .22678564+01 | .50484838+00 |
| .21991148+00 | .19343716+01 | .21643415+00 | .22805805+01 | .50977012+00 |
| .22078414+00 | .19343788+01 | .21557771+00 | .22935327+01 | .51476717+00 |
| .22165681+00 | .19343888+01 | .21472725+00 | .23067196+01 | .51984168+00 |
| .22252947+00 | .19344016+01 | .21388250+00 | .23201479+01 | .52499585+00 |
| .22340214+00 | .19344170+01 | .21304318+00 | .23338251+01 | .53023203+00 |
| .22427480+00 | .19344351+01 | .21220902+00 | .23477585+01 | .53555261+00 |
| .22514746+00 | .19344559+01 | .21137978+00 | .23619559+01 | .54096007+00 |
| .22602013+00 | .19344792+01 | .21055519+00 | .23764256+01 | .54645712+00 |
| .22689279+00 | .19345051+01 | .20973501+00 | .23911761+01 | .55204646+00 |
| .22776546+00 | .19345336+01 | .20891899+00 | .24062165+01 | .55773100+00 |
| .22863812+00 | .19345645+01 | .20810688+00 | .24215560+01 | .56351370+00 |
| .22951078+00 | .19345989+01 | .20729846+00 | .24293411+01 | .56644286+00 |
| .22994712+00 | .19346156+01 | .20689855+00 | .24451483+01 | .56939776+00 |
| .23036345+00 | .19346339+01 | .20649348+00 | .24531729+01 | .57237883+00 |
| .23081978+00 | .19346528+01 | .20609270+00 | .24612801+01 | .57538647+00 |
| .23125611+00 | .19346723+01 | .20569170+00 | .24694715+01 | .57842113+00 |
| .23169244+00 | .19346924+01 | .20529195+00 | .24777482+01 | .58148330+00 |
| .23212878+00 | .19347131+01 | .20489291+00 | .24861118+01 | .58457340+00 |
| .23256511+00 | .19347344+01 | .20449455+00 | .24945639+01 | .58769190+00 |
| .23300144+00 | .19347563+01 | .20409685+00 | .25031061+01 | .59083927+00 |
| .23343777+00 | .19347789+01 | .20369978+00 | .25117397+01 | .59401607+00 |
| .23387410+00 | .19348020+01 | .20330331+00 | .25204668+01 | .59722272+00 |
| .23431044+00 | .19348258+01 | .20290742+00 | .25292886+01 | .60045985+00 |
| .23474677+00 | .19348501+01 | .20251206+00 | .25382071+01 | .60372785+00 |
| .23518310+00 | .19348751+01 | .20211721+00 | .25472242+01 | .60702738+00 |
| .23561943+00 | .19349007+01 | .20172285+00 | .25563415+01 | .61035901+00 |
| .23605577+00 | .19349268+01 | .20132894+00 | .25655610+01 | .61372323+00 |
| .23649210+00 | .19349536+01 | .20093545+00 | .25748846+01 | .61712073+00 |
| .23692843+00 | .19349810+01 | .20054236+00 | .25843142+01 | .62055208+00 |
| .23736476+00 | .19350090+01 | .20014964+00 | .25938521+01 | .62401786+00 |
| .23780109+00 | .19350376+01 | .19975725+00 | .26035002+01 | .62751882+00 |
| .23823743+00 | .19350668+01 | .19936517+00 | .26132606+01 | .63105553+00 |
| .23867376+00 | .19350966+01 | .19897337+00 | .26231357+01 | .63462671+00 |
| .23911009+00 | .19351270+01 | .19858181+00 | .26331275+01 | .63823904+00 |
| .23954642+00 | .19351580+01 | .19819046+00 | .26432389+01 | .64188724+00 |
| .23998275+00 | .19351897+01 | .19779930+00 | .26534718+01 | .64557412+00 |
| .24041909+00 | .19352219+01 | .19740829+00 | .26638289+01 | .64930037+00 |
|              |              |              |              | .65306678+00 |

TABLE 106. (Concluded)

| $M_{\infty} = .27500205+02$ |                     |                      | $\Theta_s = .21816615+00$ |                 |
|-----------------------------|---------------------|----------------------|---------------------------|-----------------|
| $\underline{\Theta}$        | $\underline{M_1^*}$ | $\underline{\psi_1}$ | $\underline{x}$           | $\underline{r}$ |
| .24085542+00                | .19352548+01        | .19701740+00         | .26743129+01              | .65687418+00    |
| .24129175+00                | .19352883+01        | .19662660+00         | .26849261+01              | .66072337+00    |
| .24172808+00                | .19353224+01        | .19623586+00         | .26956716+01              | .66461527+00    |
| .24216441+00                | .19353572+01        | .19584515+00         | .27065520+01              | .66855069+00    |
| .24260075+00                | .19353925+01        | .19545442+00         | .27175704+01              | .67253061+00    |
| .24303708+00                | .19354285+01        | .19506366+00         | .27287298+01              | .67655597+00    |
| .24347341+00                | .19354652+01        | .19467282+00         | .27400331+01              | .68062770+00    |
| .24390974+00                | .19355026+01        | .19428187+00         | .27514834+01              | .68474672+00    |
| .24434606+00                | .19355407+01        | .19389078+00         | .27630843+01              | .68891417+00    |
| .24478238+00                | .19355795+01        | .19349951+00         | .27748392+01              | .69313114+00    |
| .24521871+00                | .19356189+01        | .19310802+00         | .27867517+01              | .69739873+00    |
| .24565503+00                | .19356589+01        | .19271628+00         | .27988254+01              | .70171802+00    |
| .24609136+00                | .19356996+01        | .19232424+00         | .28110640+01              | .70609026+00    |
| .24652768+00                | .19357410+01        | .19193188+00         | .28234717+01              | .71051668+00    |
| .24696401+00                | .19357830+01        | .19153916+00         | .28360523+01              | .71499850+00    |
| .24740033+00                | .19358258+01        | .19114603+00         | .28488099+01              | .71953698+00    |
| .24783666+00                | .19358692+01        | .19075244+00         | .28617493+01              | .72413360+00    |
| .24827298+00                | .19359133+01        | .19035838+00         | .28748748+01              | .72878969+00    |
| .24870931+00                | .19359581+01        | .18996378+00         | .28881909+01              | .73350669+00    |
| .24914563+00                | .19360036+01        | .18956861+00         | .29017027+01              | .73828615+00    |
| .24958196+00                | .19360498+01        | .18917282+00         | .29154150+01              | .74312955+00    |
| .25001828+00                | .19360967+01        | .18877636+00         | .29293333+01              | .74803862+00    |
| .25045460+00                | .19361444+01        | .18837919+00         | .29434630+01              | .75301500+00    |
| .25089093+00                | .19361927+01        | .18798127+00         | .29578097+01              | .75806046+00    |
| .25132725+00                | .19362419+01        | .18758254+00         | .29723795+01              | .76317684+00    |
| .25176358+00                | .19362918+01        | .18718295+00         | .29871782+01              | .76836596+00    |
| .25219990+00                | .19363425+01        | .18678246+00         | .30022125+01              | .77362984+00    |
| .25263623+00                | .19363939+01        | .18638101+00         | .30174888+01              | .77897055+00    |
| .25307255+00                | .19364461+01        | .18597854+00         | .30330143+01              | .78439020+00    |
| .25350888+00                | .19364992+01        | .18557499+00         | .30487961+01              | .78989104+00    |
| .25394520+00                | .19365530+01        | .18517031+00         | .30648418+01              | .79547541+00    |
| .25399524+00                | .19365592+01        | .18512383+00         | .30666990+01              | .79612121+00    |

$$.28138432+01 = \Delta S/R$$

$$.64620957+02 = P_s/P_{\infty}$$

$$.39570636+01 = \rho_s/\rho_{\infty}$$

$$.16330533+02 = T_s/T_{\infty}$$



TABLE 107. CONICAL FLOWFIELD  $\theta_s = 12.5 \text{ DEG}$ ;  $M_\infty = 30.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .96758172+00 | .29999843+02 | .21816615+00 | .25358886+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .21816615+00 | .19351271+01 | .21816615+00 | .22553542+01 | .50000000+00 |
| .21903881+00 | .19351286+01 | .21729687+00 | .22679385+01 | .50486665+00 |
| .21991148+00 | .19351330+01 | .21643415+00 | .22807476+01 | .50980747+00 |
| .22078414+00 | .19351402+01 | .21557770+00 | .22937877+01 | .51482441+00 |
| .22165681+00 | .19351502+01 | .21472222+00 | .23070658+01 | .51991969+00 |
| .22252947+00 | .19351629+01 | .21388244+00 | .23205886+01 | .52509556+00 |
| .22340214+00 | .19351784+01 | .21304308+00 | .23343635+01 | .53035434+00 |
| .22427480+00 | .19351965+01 | .21220887+00 | .23483982+01 | .53569853+00 |
| .22514746+00 | .19352172+01 | .21137955+00 | .23627007+01 | .54113066+00 |
| .22602013+00 | .19352406+01 | .21055487+00 | .23772794+01 | .54665346+00 |
| .22689279+00 | .19352665+01 | .20973457+00 | .23921430+01 | .55226970+00 |
| .22776546+00 | .19352949+01 | .20891840+00 | .24073007+01 | .55798231+00 |
| .22863812+00 | .19353259+01 | .20810612+00 | .24227622+01 | .56379439+00 |
| .22951078+00 | .19353423+01 | .20729137+00 | .24386100+01 | .56673873+00 |
| .22994712+00 | .19353511+01 | .20729750+00 | .24538537+01 | .56970916+00 |
| .23038345+00 | .19353770+01 | .20689448+00 | .24695463+01 | .57270610+00 |
| .23081978+00 | .19353953+01 | .20649228+00 | .24856374+01 | .57572997+00 |
| .23125611+00 | .19354142+01 | .20609088+00 | .24628125+01 | .57878124+00 |
| .23169244+00 | .19354337+01 | .20569024+00 | .24710729+01 | .58186039+00 |
| .23212878+00 | .19354538+01 | .20529033+00 | .24794201+01 | .58496785+00 |
| .23256511+00 | .19354746+01 | .20489113+00 | .24878557+01 | .58810412+00 |
| .23300144+00 | .19354959+01 | .20449261+00 | .24963812+01 | .59126969+00 |
| .23343777+00 | .19355179+01 | .20409473+00 | .25049981+01 | .59446508+00 |
| .23387410+00 | .19355404+01 | .20369747+00 | .25137082+01 | .59769077+00 |
| .23431044+00 | .19355636+01 | .20330080+00 | .25225132+01 | .60094738+00 |
| .23474677+00 | .19355874+01 | .20290468+00 | .25314147+01 | .60423534+00 |
| .23518310+00 | .19356118+01 | .20250910+00 | .25404146+01 | .60755531+00 |
| .23561943+00 | .19356367+01 | .20211401+00 | .25495147+01 | .61090784+00 |
| .23605577+00 | .19356623+01 | .20171940+00 | .25587167+01 | .61429348+00 |
| .23649210+00 | .19356886+01 | .20132523+00 | .25680229+01 | .61771291+00 |
| .23692843+00 | .19357154+01 | .20093146+00 | .25774349+01 | .62116671+00 |
| .23736476+00 | .19357428+01 | .20053808+00 | .25869549+01 | .62465549+00 |
| .23780109+00 | .19357708+01 | .20014505+00 | .25965852+01 | .62818002+00 |
| .23823743+00 | .19357994+01 | .19975234+00 | .26063276+01 | .63174086+00 |
| .23867376+00 | .19358287+01 | .19935992+00 | .26161846+01 | .63533881+00 |
| .23911009+00 | .19358585+01 | .19896776+00 | .26261584+01 | .63897451+00 |
| .23954642+00 | .19358890+01 | .19857583+00 | .26362512+01 | .64264870+00 |
| .23998275+00 | .19359201+01 | .19818410+00 | .26464657+01 | .64636224+00 |
| .24041909+00 | .19359518+01 | .19779253+00 | .26568043+01 | .65011582+00 |
|              | .19359841+01 | .19740110+00 | .26672694+01 | .65391025+00 |

TABLE 107. (Concluded)

| $M_{\infty} = .29999843+02$ |              | $\Theta_s = .21816615+00$ |              |              |
|-----------------------------|--------------|---------------------------|--------------|--------------|
| $\Theta$                    | $M_1^*$      | $\psi_1$                  | $x$          | $r$          |
| .24085542+00                | .19360170+01 | .19700977+00              | .26778639+01 | .66774640+00 |
| .24129175+00                | .19360506+01 | .19661851+00              | .26805909+01 | .66162510+00 |
| .24172808+00                | .19360847+01 | .19622729+00              | .26994519+01 | .66554729+00 |
| .24216441+00                | .19361196+01 | .19583507+00              | .27104509+01 | .66951378+00 |
| .24260075+00                | .19361550+01 | .19544483+00              | .27215908+01 | .67352557+00 |
| .24303708+00                | .19361911+01 | .19505352+00              | .27326747+01 | .67758366+00 |
| .24347341+00                | .19362278+01 | .19466211+00              | .27443056+01 | .68168900+00 |
| .24390974+00                | .19362653+01 | .19427057+00              | .27558867+01 | .68584255+00 |
| .24434606+00                | .19363035+01 | .19387882+00              | .27676217+01 | .68990454+00 |
| .24478238+00                | .19363424+01 | .19348696+00              | .27795141+01 | .69429889+00 |
| .24521871+00                | .19363818+01 | .19309480+00              | .27915677+01 | .69860394+00 |
| .24565503+00                | .19364220+01 | .19270237+00              | .28037859+01 | .70296171+00 |
| .24609136+00                | .19364628+01 | .19230962+00              | .28161729+01 | .70737353+00 |
| .24652768+00                | .19365043+01 | .19191652+00              | .28287328+01 | .71184062+00 |
| .24696401+00                | .19365464+01 | .19152302+00              | .28414699+01 | .71636432+00 |
| .24740033+00                | .19365893+01 | .19112908+00              | .28543881+01 | .72094590+00 |
| .24783666+00                | .19366328+01 | .19073866+00              | .28674924+01 | .72558682+00 |
| .24827298+00                | .19366770+01 | .19033972+00              | .28807873+01 | .73028855+00 |
| .24870931+00                | .19367220+01 | .18994422+00              | .28942775+01 | .73505247+00 |
| .24914563+00                | .19367676+01 | .18954811+00              | .29079683+01 | .73988033+00 |
| .24958196+00                | .19368140+01 | .18915134+00              | .29218648+01 | .74477359+00 |
| .25001828+00                | .19368611+01 | .18875388+00              | .29359726+01 | .74973404+00 |
| .25045460+00                | .19369089+01 | .18835567+00              | .29502974+01 | .75476342+00 |
| .25089093+00                | .19369574+01 | .18795665+00              | .29648447+01 | .75986347+00 |
| .25132725+00                | .19370067+01 | .18755679+00              | .29796211+01 | .76503616+00 |
| .25176358+00                | .19370568+01 | .18715603+00              | .29946328+01 | .77028344+00 |
| .25219990+00                | .19371077+01 | .18675432+00              | .30098865+01 | .77560735+00 |
| .25263623+00                | .19371593+01 | .18635159+00              | .30253892+01 | .78101005+00 |
| .25307255+00                | .19372118+01 | .18594781+00              | .30411477+01 | .78649365+00 |
| .25350888+00                | .19372650+01 | .18554289+00              | .30571703+01 | .79206066+00 |
| .25356886+00                | .19372749+01 | .18546853+00              | .30601363+01 | .79309030+00 |

$$.30477983+01 = \Delta S/R$$

$$.76652671+02 = P_s/P_{\infty}$$

$$.39922808+01 = \rho_s/\rho_{\infty}$$

$$.19200221+02 = T_s/T_{\infty}$$

TABLE 108. CONICAL FLOWFIELD  $\theta_s = 15.0$  DEG;  $M_\infty = 1.2456277$

| $\underline{u}_s$    | $\underline{M}_\infty$ | $\underline{\theta}_s$ | $\underline{\theta}_w$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .30000938+00         | .12456277+01           | .26179938+00           | .10121471+01           |                 |
| $\underline{\theta}$ | $\underline{M}_1^*$    | $\underline{\psi}_1$   | $\underline{x}$        | $\underline{r}$ |
| .26179938+00         | .10000000+01           | .26179938+00           | .18560254+01           | .50000000+00    |
| .28361598+00         | .10004184+01           | .24161957+00           | .18362261+01           | .54104052+00    |
| .30543259+00         | .10014873+01           | .22423744+00           | .18184417+01           | .58281135+00    |
| .32724919+00         | .10030028+01           | .20908500+00           | .18024346+01           | .62542219+00    |
| .34906580+00         | .10046301+01           | .19573890+00           | .18330335+01           | .66898935+00    |
| .37088240+00         | .10068782+01           | .18387669+00           | .18331160+01           | .71363744+00    |
| .39075387+00         | .10089030+01           | .17405789+00           | .18336690+01           | .75678363+00    |
| .41102495+00         | .10110269+01           | .16612794+00           | .18333656+01           | .79907296+00    |
| .43109623+00         | .10132280+01           | .15678095+00           | .18341726+01           | .84362493+00    |
| .45116750+00         | .10154795+01           | .14945339+00           | .18360551+01           | .88967554+00    |
| .47123878+00         | .10177775+01           | .14251934+00           | .18391084+01           | .93707222+00    |
| .48956472+00         | .10199060+01           | .13662787+00           | .18428851+01           | .98192692+00    |
| .50789060+00         | .10220584+01           | .13110770+00           | .18475694+01           | .10283434+01    |
| .52621640+00         | .10242313+01           | .12591861+00           | .18532867+01           | .10764736+01    |
| .54454219+00         | .10264229+01           | .12102581+00           | .18600534+01           | .11264670+01    |
| .56286798+00         | .10286319+01           | .11639865+00           | .18679274+01           | .11786725+01    |
| .57944445+00         | .10306454+01           | .11241876+00           | .18760645+01           | .12276599+01    |
| .59602693+00         | .10326735+01           | .10861675+00           | .18852287+01           | .12787937+01    |
| .61260941+00         | .10347168+01           | .10497677+00           | .18954940+01           | .13321722+01    |
| .62919789+00         | .10367766+01           | .10148448+00           | .19069472+01           | .13880185+01    |
| .64577036+00         | .10388543+01           | .98126799+00           | .19196693+01           | .14465853+01    |
| .66060553+00         | .10407301+01           | .95226929+00           | .19322797+01           | .15015274+01    |
| .67544069+00         | .10426233+01           | .92417374+00           | .19460956+01           | .15591110+01    |
| .69027586+00         | .10445359+01           | .89690827+00           | .19612514+01           | .16196014+01    |
| .70511102+00         | .10464699+01           | .87040417+00           | .19776796+01           | .16833006+01    |
| .71994618+00         | .10484275+01           | .84459618+00           | .19961337+01           | .17505547+01    |
| .73303603+00         | .10501767+01           | .82235292+00           | .20137331+01           | .18131652+01    |
| .74612588+00         | .10519485+01           | .80056250+00           | .20326813+01           | .18791673+01    |
| .75921573+00         | .10537452+01           | .77918485+00           | .20537450+01           | .19489215+01    |
| .77230559+00         | .10555694+01           | .75818114+00           | .20765176+01           | .20228434+01    |
| .78539544+00         | .10574239+01           | .73751256+00           | .21014259+01           | .21014144+01    |
| .79673977+00         | .10590582+01           | .71984112+00           | .21244459+01           | .21737024+01    |
| .80808451+00         | .10607201+01           | .70236636+00           | .21504735+01           | .22503287+01    |
| .81942905+00         | .10624122+01           | .68506263+00           | .21782465+01           | .23317662+01    |
| .83077358+00         | .10641376+01           | .66790296+00           | .22085450+01           | .24186601+01    |
| .84211812+00         | .10658996+01           | .65085851+00           | .22410992+01           | .25115953+01    |
| .85171735+00         | .10674221+01           | .63650437+00           | .22722742+01           | .25935805+01    |
| .86131657+00         | .10689763+01           | .62219165+00           | .23009458+01           | .26850607+01    |
| .87091579+00         | .10705652+01           | .60789750+00           | .23315878+01           | .27807031+01    |
| .88051502+00         | .10721923+01           | .59360489+00           | .23610983+01           | .28833033+01    |



TABLE 108. (Concluded)

$$M_{\odot} = .12456277+01$$

$$\Theta_s = .26179933+00$$

| $\underline{\Theta}$ | $\underline{M_1^*}$ | $\underline{\psi_1}$ | $\underline{x}$ | $\underline{r}$ |
|----------------------|---------------------|----------------------|-----------------|-----------------|
| .89011424+00         | .10738616+01        | .57923219-01         | .24243467+01    | .29937963+01    |
| .89796615+00         | .10752621+01        | .56752279-01         | .29530038+01    | .30908860+01    |
| .90562206+00         | .10766968+01        | .55570833-01         | .29349795+01    | .31946936+01    |
| .91367597+00         | .10781642+01        | .54381892-01         | .29507262+01    | .33061851+01    |
| .92152988+00         | .10796831+01        | .53183220-01         | .26007830+01    | .34263769+01    |
| .92934379+00         | .10812431+01        | .51972216-01         | .26556111+01    | .35565325+01    |
| .93549239+00         | .10824914+01        | .51019944+01         | .27025583+01    | .36654295+01    |
| .94160099+00         | .10837746+01        | .50036793+01         | .27532586+01    | .37825563+01    |
| .94770758+00         | .10850948+01        | .49080901+01         | .28041638+01    | .39083562+01    |
| .95381618+00         | .10864567+01        | .48090078+01         | .28586407+01    | .40442643+01    |
| .95992678+00         | .10878648+01        | .47081761+01         | .29352062+01    | .41918704+01    |
| .96429006+00         | .10889020+01        | .46349196+01         | .29566276+01    | .43051543+01    |
| .96865334+00         | .10899661+01        | .45604773+01         | .30424630+01    | .44267695+01    |
| .97301605+00         | .10910668+01        | .44847198+01         | .31026348+01    | .45567805+01    |
| .97737636+00         | .10921965+01        | .44074662+01         | .31679835+01    | .46966677+01    |
| .98174068+00         | .10933701+01        | .43264960+01         | .32592884+01    | .48478639+01    |
| .98435806+00         | .10940935+01        | .42801924+01         | .32853179+01    | .49447191+01    |
| .98697545+00         | .10948337+01        | .42311199+01         | .33340747+01    | .50467106+01    |
| .98959284+00         | .10955721+01        | .41812114+01         | .33856393+01    | .51543484+01    |
| .99221023+00         | .10963700+01        | .41303851+01         | .34409363+01    | .52682201+01    |
| .99482762+00         | .10971692+01        | .40785529+01         | .34997407+01    | .53890094+01    |
| .99744501+00         | .10979916+01        | .40256090+01         | .35626976+01    | .55175149+01    |
| .10000244+01         | .10988394+01        | .39714307+01         | .36303304+01    | .56546806+01    |
| .10026796+01         | .10997163+01        | .39158762+01         | .37032645+01    | .58016300+01    |
| .10052972+01         | .11006225+01        | .38587809+01         | .37822594+01    | .59597228+01    |
| .10079146+01         | .11015645+01        | .37999392+01         | .38682411+01    | .61306134+01    |
| .10105319+01         | .11025460+01        | .37391096+01         | .39623619+01    | .63153540+01    |
| .10121471+01         | .11031736+01        | .37004501+01         | .40251203+01    | .64394768+01    |

$$.19691698-03 = \Delta S/R$$

$$.13809529+01 = P_s/P_{\infty}$$

$$.12135779+01 = \rho_s/\rho_{\infty}$$

$$.11379022+01 = T_s/T_{\infty}$$



TABLE 109. CONICAL FLOWFIELD  $\theta_s = 15.0$  DEG;  $M_\infty = 1.5$

| $\underline{u_s}$    | $\underline{M_\infty}$ | $\underline{\theta_s}$ | $\underline{\theta_w}$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .57968248+00         | .14999922+01           | .26179938+00           | .79482573+00           |                 |
| $\underline{\theta}$ | $\underline{M_1^*}$    | $\underline{\psi_1}$   | $\underline{x}$        | $\underline{r}$ |
| .26179938+00         | .11593432+01           | .26179938+00           | .18660254+01           | .50000000+00    |
| .27750733+00         | .11596039+01           | .24695664+00           | .18797780+01           | .53546879+00    |
| .29321529+00         | .11602981+01           | .23364800+00           | .18945760+01           | .57200615+00    |
| .30892324+00         | .11613251+01           | .22162672+00           | .19104736+01           | .60970981+00    |
| .32463120+00         | .11626041+01           | .21069667+00           | .19275328+01           | .64868637+00    |
| .34033915+00         | .11640856+01           | .20070042+00           | .19456254+01           | .68905278+00    |
| .35473811+00         | .11655840+01           | .19224635+00           | .19637473+01           | .72738631+00    |
| .36913707+00         | .11671917+01           | .18438521+00           | .19828470+01           | .76710548+00    |
| .38353603+00         | .11688897+01           | .17704696+00           | .20032061+01           | .80833107+00    |
| .39793499+00         | .11706635+01           | .17017206+00           | .20249184+01           | .85119711+00    |
| .41233395+00         | .11725017+01           | .16370903+00           | .20480893+01           | .89585242+00    |
| .42542391+00         | .11742214+01           | .15815349+00           | .20705202+01           | .93814024+00    |
| .43851387+00         | .11759821+01           | .15287235+00           | .20943578+01           | .98218319+00    |
| .45160383+00         | .11777799+01           | .14783958+00           | .21197175+01           | .10261365+01    |
| .46469380+00         | .11796120+01           | .14303201+00           | .21467297+01           | .10761736+01    |
| .47778376+00         | .11814764+01           | .13842891+00           | .21755428+01           | .11264899+01    |
| .48956472+00         | .11831810+01           | .13444536+00           | .22031534+01           | .11739044+01    |
| .50134568+00         | .11849102+01           | .13059980+00           | .22324985+01           | .12235232+01    |
| .51312654+00         | .11866640+01           | .12688062+00           | .22637364+01           | .12755491+01    |
| .52490741+00         | .11884429+01           | .12327726+00           | .22970465+01           | .13302114+01    |
| .53668828+00         | .11902472+01           | .11977966+00           | .23326344+01           | .13877701+01    |
| .54716016+00         | .11918733+01           | .11675260+00           | .23663695+01           | .14416033+01    |
| .55763204+00         | .11935214+01           | .11379551+00           | .24022782+01           | .14981945+01    |
| .56810392+00         | .11951926+01           | .11090281+00           | .24405756+01           | .15578114+01    |
| .57857580+00         | .11968884+01           | .10806881+00           | .24815077+01           | .16207590+01    |
| .58904768+00         | .11986104+01           | .10528794+00           | .25253576+01           | .16873865+01    |
| .59821057+00         | .12001903+01           | .10269406+00           | .25663760+01           | .17490187+01    |
| .60737347+00         | .12016933+01           | .10053319+00           | .26101313+01           | .18140842+01    |
| .61653636+00         | .12032711+01           | .98201774+00           | .26569132+01           | .18829356+01    |
| .62569926+00         | .12048758+01           | .95898184+00           | .27070569+01           | .19559791+01    |
| .63486215+00         | .12065095+01           | .93612738+00           | .27609513+01           | .20336841+01    |
| .64271607+00         | .12079349+01           | .91670305+00           | .28104742+01           | .21044102+01    |
| .65056998+00         | .12093854+01           | .89736883+00           | .28634180+01           | .21743593+01    |
| .65842389+00         | .12108631+01           | .87815911+00           | .29201677+01           | .22589907+01    |
| .66627780+00         | .12123702+01           | .85898638+00           | .29811715+01           | .23438371+01    |
| .67413171+00         | .12139095+01           | .83984151+00           | .30469549+01           | .24345210+01    |
| .68067663+00         | .12152190+01           | .82388595+00           | .31058698+01           | .25150746+01    |
| .68722156+00         | .12165550+01           | .80790760+00           | .31689540+01           | .26006836+01    |
| .69376648+00         | .12179196+01           | .79168496+00           | .32360986+01           | .26919234+01    |
| .70031141+00         | .12193156+01           | .77579401+00           | .33096784+01           | .27894660+01    |

TABLE 109. (Concluded)

$$M_{\infty} = .14999922+01$$

$$\Theta_s = .26179938+00$$

| $\underline{\theta}$ | $\underline{M}_1^*$ | $\underline{\psi}_1$ | $\underline{x}$ | $\underline{r}$ |
|----------------------|---------------------|----------------------|-----------------|-----------------|
| .70685633+00         | .12207458+01        | .75960815-01         | .33885739+01    | .28941036+01    |
| .71209227+00         | .12219169+01        | .74657112-01         | .34564898+01    | .29835495+01    |
| .71732621+00         | .12231142+01        | .73343731-01         | .35291988+01    | .30787032+01    |
| .72256415+00         | .12243358+01        | .72018757-01         | .36072732+01    | .31802252+01    |
| .72780009+00         | .12255965+01        | .70680037-01         | .36913869+01    | .32888911+01    |
| .73303603+00         | .12268871+01        | .69325089-01         | .37823419+01    | .34056205+01    |
| .73826299+00         | .12278794+01        | .68296574-01         | .38836177+01    | .354991113+01   |
| .74088936+00         | .12286946+01        | .67256046-01         | .39337433+01    | .36982804+01    |
| .74481545+00         | .12299385+01        | .66201946-01         | .40172768+01    | .37037638+01    |
| .74874153+00         | .12310012+01        | .65132543-01         | .41066738+01    | .38163065+01    |
| .75266761+00         | .12320972+01        | .64045869-01         | .42033010+01    | .39367765+01    |
| .75528500+00         | .12328456+01        | .63310696-01         | .42718232+01    | .40219945+01    |
| .75790239+00         | .12336093+01        | .62566079-01         | .43440977+01    | .41115446+01    |
| .76051978+00         | .12343893+01        | .61811164-01         | .44204808+01    | .42058279+01    |
| .76313717+00         | .12351869+01        | .61044976-01         | .45013803+01    | .43053023+01    |
| .76575456+00         | .12360035+01        | .60266443-01         | .45872648+01    | .44104936+01    |
| .76837195+00         | .12368407+01        | .59474371-01         | .46786771+01    | .45220090+01    |
| .77098934+00         | .12377001+01        | .58667347-01         | .47762491+01    | .46405545+01    |
| .77360673+00         | .12385838+01        | .57843619-01         | .48807218+01    | .47669565+01    |
| .77622411+00         | .12394942+01        | .57001919-01         | .49929727+01    | .49021913+01    |
| .77884150+00         | .12404340+01        | .56139497-01         | .51140533+01    | .50474269+01    |
| .78145889+00         | .12414065+01        | .55254042-01         | .52452337+01    | .52040707+01    |
| .78407628+00         | .12424156+01        | .54342464-01         | .53880680+01    | .53738119+01    |
| .78669367+00         | .12434659+01        | .53401120-01         | .55444914+01    | .55588759+01    |
| .78931106+00         | .12445633+01        | .52425519-01         | .57169447+01    | .57618602+01    |
| .79192845+00         | .12457151+01        | .51409908-01         | .59085770+01    | .59862546+01    |
| .79454584+00         | .12469305+01        | .50347045-01         | .61235451+01    | .62366148+01    |
| .79716323+00         | .12482047+01        | .49230220-01         | .63981320+01    | .652651626+01   |

$$.37776306-03 = \Delta S/R$$

$$.14548319+01 = P_s/P_{\infty}$$

$$.12520455+01 = \rho_s/\rho_{\infty}$$

$$.11619841+01 = T_s/T_{\infty}$$

TABLE 110. CONICAL FLOWFIELD  $\theta_s = 15.0$  DEG;  $M_\infty = 2.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .68701307+00 | .19999984+01 | .26179938+00 | .60086110+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .26179938+00 | .13740004+01 | .26179938+00 | .18660254+01 | .50000000+00 |
| .27227135+00 | .13741420+01 | .25171623+00 | .18666867+01 | .52677236+00 |
| .28274332+00 | .13745338+01 | .24235152+00 | .19035104+01 | .55447347+00 |
| .29321529+00 | .13751345+01 | .23361110+00 | .19315718+01 | .58317584+00 |
| .30368726+00 | .13759118+01 | .22542279+00 | .19559555+01 | .61295923+00 |
| .31415923+00 | .13768394+01 | .21772360+00 | .19817573+01 | .64391188+00 |
| .32375854+00 | .13778040+01 | .21104943+00 | .20067457+01 | .67339545+00 |
| .33335784+00 | .13788644+01 | .20470463+00 | .20331082+01 | .70402671+00 |
| .34295715+00 | .13800099+01 | .19865736+00 | .20609487+01 | .73589788+00 |
| .35255645+00 | .13812317+01 | .19267940+00 | .20903333+01 | .76911116+00 |
| .36215576+00 | .13825226+01 | .18673455+00 | .21215426+01 | .80378042+00 |
| .37088240+00 | .13837513+01 | .18085076+00 | .21514897+01 | .83666842+00 |
| .37960904+00 | .13850267+01 | .17763729+00 | .21831083+01 | .87097172+00 |
| .38833568+00 | .13863523+01 | .17332056+00 | .22165377+01 | .90660932+00 |
| .39706232+00 | .13877196+01 | .16894441+00 | .22519352+01 | .94431458+00 |
| .40578897+00 | .13891292+01 | .16469682+00 | .22894784+01 | .98363732+00 |
| .41364294+00 | .13904330+01 | .16097459+00 | .23252676+01 | .10207209+01 |
| .42149692+00 | .13917696+01 | .15733967+00 | .23631236+01 | .10595518+01 |
| .42935090+00 | .13931389+01 | .15378474+00 | .24032336+01 | .11002859+01 |
| .43720488+00 | .13945411+01 | .15030279+00 | .24458100+01 | .11430992+01 |
| .44505885+00 | .13959765+01 | .14688708+00 | .24910952+01 | .11881911+01 |
| .45204017+00 | .13972811+01 | .14390114+00 | .25338455+01 | .12303689+01 |
| .45902148+00 | .13986133+01 | .14095776+00 | .25791757+01 | .12747076+01 |
| .46600279+00 | .13999742+01 | .13805253+00 | .26273386+01 | .13214132+01 |
| .47298411+00 | .14013650+01 | .13518084+00 | .26786227+01 | .13707201+01 |
| .47996542+00 | .14027871+01 | .13233822+00 | .27333598+01 | .14228966+01 |
| .48607407+00 | .14040587+01 | .12987106+00 | .27843871+01 | .14711470+01 |
| .49218272+00 | .14053569+01 | .12741941+00 | .28366471+01 | .15220687+01 |
| .49829137+00 | .14066836+01 | .12497992+00 | .28964797+01 | .15759340+01 |
| .50439998+00 | .14080406+01 | .12254906+00 | .29582769+01 | .16330552+01 |
| .51050857+00 | .14094299+01 | .12012318+00 | .30244957+01 | .16937980+01 |
| .51574451+00 | .14106485+01 | .11804479+00 | .30851763+01 | .17490635+01 |
| .52098045+00 | .14118946+01 | .11596441+00 | .31498861+01 | .18076087+01 |
| .52621640+00 | .14131702+01 | .11387917+00 | .32190852+01 | .18697918+01 |
| .53145234+00 | .14144778+01 | .11178584+00 | .32932982+01 | .19360278+01 |
| .53668828+00 | .14158201+01 | .10968085+00 | .33731509+01 | .20068117+01 |
| .54105156+00 | .14169675+01 | .10791498+00 | .34445327+01 | .20696816+01 |
| .54541387+00 | .14181445+01 | .10613587+00 | .35208295+01 | .21364844+01 |
| .54977619+00 | .14193525+01 | .10434055+00 | .36026475+01 | .22076927+01 |
| .55413850+00 | .14205940+01 | .10252569+00 | .36906828+01 | .22838458+01 |



TABLE 110. (Concluded)

$$M_{\infty} = .14949584+01$$

$$\Theta_s = .26174938+00$$

| $\underline{\Theta}$ | $\underline{M_1^*}$ | $\underline{\psi_1}$ | $\underline{x}$ | $\underline{r}$ |
|----------------------|---------------------|----------------------|-----------------|-----------------|
| .55550082+00         | .14218726+01        | .10066762+00         | .37657652+01    | .23655847+01    |
| .56349067+00         | .14229245+01        | .99197619-01         | .38675683+01    | .24355068+01    |
| .56548052+00         | .14240049+01        | .97667520-01         | .39551232+01    | .25070633+01    |
| .56847037+00         | .14251161+01        | .96154489-01         | .40491457+01    | .25894970+01    |
| .57246023+00         | .14262615+01        | .94595164-01         | .41504679+01    | .26747612+01    |
| .57545008+00         | .14274444+01        | .93005717-01         | .42601745+01    | .27665377+01    |
| .57856747+00         | .14283589+01        | .91791138-01         | .43466544+01    | .28402058+01    |
| .58118486+00         | .14292990+01        | .90554846-01         | .44431511+01    | .29185425+01    |
| .58380225+00         | .14302671+01        | .89294240-01         | .45444049+01    | .30021082+01    |
| .58641963+00         | .14312661+01        | .88006362-01         | .46532965+01    | .30915689+01    |
| .58903702+00         | .14322993+01        | .86687639-01         | .47706855+01    | .31877236+01    |
| .59078195+00         | .14330091+01        | .85789362-01         | .48547357+01    | .32560165+01    |
| .59252688+00         | .14337371+01        | .84874094-01         | .49434711+01    | .33280512+01    |
| .59427180+00         | .14344850+01        | .83940223-01         | .50376147+01    | .34042200+01    |
| .59601673+00         | .14352545+01        | .82985906-01         | .51377789+01    | .34849613+01    |
| .59776165+00         | .14360477+01        | .82008868-01         | .52446819+01    | .35708722+01    |
| .59950658+00         | .14368671+01        | .81006676-01         | .53591773+01    | .36625297+01    |
| .60086110+00         | .14375229+01        | .80209434-01         | .54539366+01    | .37361373+01    |

$$.21234602-02 = \Delta S/R$$

$$.14813360+01 = P_s/P_{\infty}$$

$$.13646495+01 = \rho_s/\rho_{\infty}$$

$$.12320644+01 = T_s/T_{\infty}$$

TABLE 111. CONICAL FLOWFIELD  $\theta_s = 15.0$  DEG;  $M_\infty = 2.5$ 

| $\underline{u}_s$    | $\underline{M}_\infty$ | $\underline{\theta}_s$ | $\underline{\theta}_w$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .75716196+00         | .24999954+01           | .26179936+00           | .50636184+00           |                 |
| $\underline{\theta}$ | $\underline{M}_1^*$    | $\underline{\psi}_1$   | $\underline{x}$        | $\underline{r}$ |
| .26179938+00         | .15142955+01           | .26179936+00           | .18660254+01           | .50000000+00    |
| .26878069+00         | .15143664+01           | .25499384+00           | .18656065+01           | .51939080+00    |
| .27576201+00         | .15145675+01           | .24851697+00           | .19061279+01           | .53937979+00    |
| .28274332+00         | .15148841+01           | .24233771+00           | .19275511+01           | .56000531+00    |
| .28972463+00         | .15153038+01           | .23642876+00           | .19499628+01           | .58130911+00    |
| .29670594+00         | .15157814+01           | .23111306+00           | .19719269+01           | .60193778+00    |
| .30368725+00         | .15163330+01           | .22599584+00           | .19948712+01           | .62324338+00    |
| .31066856+00         | .15169523+01           | .22106103+00           | .20186577+01           | .64527033+00    |
| .31764987+00         | .15176338+01           | .21629408+00           | .20439545+01           | .66806722+00    |
| .32463118+00         | .15183221+01           | .21196463+00           | .20684464+01           | .69008582+00    |
| .33161249+00         | .15190574+01           | .20779991+00           | .20940384+01           | .71286871+00    |
| .33859380+00         | .15198369+01           | .20373075+00           | .21208044+01           | .73646755+00    |
| .34557511+00         | .15206583+01           | .19976863+00           | .21488259+01           | .76093903+00    |
| .35255642+00         | .15214569+01           | .19617841+00           | .21760485+01           | .78644982+00    |
| .35953773+00         | .15222867+01           | .19266765+00           | .22045104+01           | .80891822+00    |
| .36651904+00         | .15231525+01           | .18923068+00           | .22342992+01           | .83425906+00    |
| .37350035+00         | .15240476+01           | .18586211+00           | .22655115+01           | .86058691+00    |
| .38048166+00         | .15249009+01           | .18280892+00           | .22956789+01           | .88582861+00    |
| .38746297+00         | .15257800+01           | .17980574+00           | .23272435+01           | .91203658+00    |
| .39444428+00         | .15266845+01           | .17684879+00           | .23603083+01           | .93928056+00    |
| .40142559+00         | .15276144+01           | .17393440+00           | .23949876+01           | .96763760+00    |
| .40840690+00         | .15284892+01           | .17129717+00           | .24283035+01           | .99468207+00    |
| .41538821+00         | .15293657+01           | .16868996+00           | .24631910+01           | .10228061+01    |
| .42236952+00         | .15303039+01           | .16611002+00           | .24997705+01           | .10520902+01    |
| .42935083+00         | .15312444+01           | .16355470+00           | .25381761+01           | .10826236+01    |
| .43633214+00         | .15321191+01           | .16125075+00           | .25748003+01           | .11115486+01    |
| .44331345+00         | .15330131+01           | .15896279+00           | .26131820+01           | .11416709+01    |
| .45029476+00         | .15339269+01           | .15668874+00           | .26534606+01           | .11730824+01    |
| .45727607+00         | .15348611+01           | .15442642+00           | .26957914+01           | .12058855+01    |
| .46425738+00         | .15357201+01           | .15239658+00           | .27357873+01           | .12366924+01    |
| .47123869+00         | .15365968+01           | .15037676+00           | .27777289+01           | .12688123+01    |
| .47821999+00         | .15374922+01           | .14835930+00           | .28217741+01           | .13023485+01    |
| .48520130+00         | .15384070+01           | .14634428+00           | .28681005+01           | .13374169+01    |
| .49218261+00         | .15392372+01           | .14455371+00           | .29113552+01           | .13699794+01    |
| .49916392+00         | .15400843+01           | .14276211+00           | .29567269+01           | .14039568+01    |
| .50614523+00         | .15409490+01           | .14097679+00           | .30043910+01           | .14394626+01    |
| .51312654+00         | .15418323+01           | .13918972+00           | .30545456+01           | .14766246+01    |
| .52010785+00         | .15426216+01           | .13759160+00           | .31006480+01           | .15106122+01    |
| .52708916+00         | .15434275+01           | .13600794+00           | .31489941+01           | .15460845+01    |
| .53407047+00         | .15442502+01           | .13441715+00           | .31997721+01           | .15831625+01    |

TABLE 111. (Concluded)

$$M_{\infty} = .24999954+01$$

$$\Theta_s = .26179938+00$$

| $\underline{\Theta}$ | $\underline{M_1^*}$ | $\underline{\psi_1}$ | $\underline{x}$ | $\underline{r}$ |
|----------------------|---------------------|----------------------|-----------------|-----------------|
| .46251196+00         | .15450905+01        | .13281777+00         | .32531934+01    | .16219612+01    |
| .46512991+00         | .15456256+01        | .13143896+00         | .33012670+01    | .16567549+01    |
| .46774786+00         | .15465752+01        | .13005151+00         | .33516260+01    | .16930265+01    |
| .47036581+00         | .15473402+01        | .12865430+00         | .34044589+01    | .17309160+01    |
| .47298376+00         | .15481215+01        | .12724596+00         | .34599782+01    | .17705582+01    |
| .47516538+00         | .15487859+01        | .12606283+00         | .35084683+01    | .18090411+01    |
| .47734700+00         | .15494630+01        | .12487008+00         | .35591446+01    | .18409441+01    |
| .47952862+00         | .15501535+01        | .12366674+00         | .36121809+01    | .18783768+01    |
| .48171025+00         | .15508564+01        | .12245170+00         | .36677704+01    | .19174611+01    |
| .48345555+00         | .15514331+01        | .12147043+00         | .37142264+01    | .19500093+01    |
| .48520084+00         | .15520182+01        | .12048026+00         | .37625790+01    | .19837795+01    |
| .48694614+00         | .15526140+01        | .11948043+00         | .38129666+01    | .20188584+01    |
| .48869144+00         | .15532212+01        | .11847016+00         | .38655410+01    | .20553409+01    |
| .49000042+00         | .15536845+01        | .11770511+00         | .39065079+01    | .20836871+01    |
| .49130939+00         | .15541548+01        | .11693328+00         | .39488786+01    | .21129313+01    |
| .49261636+00         | .15546326+01        | .11615425+00         | .39927385+01    | .21431269+01    |
| .49392734+00         | .15551182+01        | .11536757+00         | .40381812+01    | .21743321+01    |
| .49523631+00         | .15556121+01        | .11457277+00         | .40853094+01    | .22066108+01    |
| .49654528+00         | .15561144+01        | .11376928+00         | .41342354+01    | .22400327+01    |
| .49785426+00         | .15566259+01        | .11295646+00         | .41850829+01    | .22746746+01    |
| .49916323+00         | .15571470+01        | .11213375+00         | .42379892+01    | .23106215+01    |
| .50047211+00         | .15576782+01        | .11130029+00         | .42931014+01    | .23479643+01    |
| .50178080+00         | .15582202+01        | .11045526+00         | .43505839+01    | .23868043+01    |
| .50308950+00         | .15587736+01        | .10959794+00         | .44106333+01    | .24272633+01    |
| .50439819+00         | .15593392+01        | .10872743+00         | .44734609+01    | .24694716+01    |
| .50570688+00         | .15599178+01        | .10784262+00         | .45393049+01    | .25135757+01    |
| .50636184+00         | .15602125+01        | .10739405+00         | .45734732+01    | .25364112+01    |

$$.78254044-02 = \Delta S/R$$

$$.19701464+01 = P_s/P_{\infty}$$

$$.14973450+01 = \rho_s/\rho_{\infty}$$

$$.13157173+01 = T_s/T_{\infty}$$



TABLE 112. CONICAL FLOWFIELD  $\theta_s = 15.0$  DEG;  $M_\infty = 3.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .80458266+00 | .29999965+01 | .26179936+00 | .45133519+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .26179938+00 | .16091351+01 | .26179938+00 | .18660254+01 | .50000000+00 |
| .26703537+00 | .16091780+01 | .25666283+00 | .18644973+01 | .51554010+00 |
| .27227135+00 | .16093011+01 | .25171429+00 | .19036901+01 | .53151979+00 |
| .27750733+00 | .16094976+01 | .24693871+00 | .19236425+01 | .54796393+00 |
| .28274332+00 | .16097614+01 | .24232252+00 | .19443969+01 | .56489946+00 |
| .28797930+00 | .16100874+01 | .23785347+00 | .19659995+01 | .58235554+00 |
| .29321529+00 | .16104709+01 | .23352036+00 | .19885008+01 | .60036372+00 |
| .29845127+00 | .16109080+01 | .22931296+00 | .20119553+01 | .61895820+00 |
| .30368726+00 | .16113954+01 | .22522194+00 | .20364234+01 | .63817634+00 |
| .30892324+00 | .16119300+01 | .22123855+00 | .20619713+01 | .65805891+00 |
| .31415923+00 | .16125092+01 | .21735475+00 | .20886714+01 | .67865038+00 |
| .31935225+00 | .16130245+01 | .21418888+00 | .21118591+01 | .69638659+00 |
| .32288587+00 | .16135682+01 | .21108286+00 | .21359529+01 | .71467972+00 |
| .32724919+00 | .16141393+01 | .20803276+00 | .21610078+01 | .73356319+00 |
| .33161251+00 | .16147372+01 | .20503486+00 | .21870840+01 | .75307330+00 |
| .33577583+00 | .16153611+01 | .20208559+00 | .22142472+01 | .77324960+00 |
| .34033915+00 | .16160105+01 | .19918150+00 | .22425690+01 | .79413519+00 |
| .34470247+00 | .16166851+01 | .19631925+00 | .22721289+01 | .81577748+00 |
| .34906580+00 | .16173845+01 | .19349560+00 | .23030133+01 | .83822812+00 |
| .35342912+00 | .16181085+01 | .19070737+00 | .23353181+01 | .86154415+00 |
| .35779244+00 | .16188572+01 | .18795143+00 | .23691496+01 | .88578657+00 |
| .36128309+00 | .16194739+01 | .18576786+00 | .23973929+01 | .90589910+00 |
| .36477375+00 | .16201065+01 | .18360137+00 | .24267550+01 | .92668741+00 |
| .36826441+00 | .16207552+01 | .18145040+00 | .24573087+01 | .94819632+00 |
| .37175506+00 | .16214202+01 | .17931338+00 | .24891333+01 | .97047234+00 |
| .37524572+00 | .16221017+01 | .17710865+00 | .25223166+01 | .99356674+00 |
| .37873638+00 | .16228001+01 | .17507457+00 | .25569547+01 | .10175356+01 |
| .38222703+00 | .16235158+01 | .17296949+00 | .25931542+01 | .10424411+01 |
| .38571769+00 | .16242493+01 | .17087166+00 | .26310328+01 | .10683514+01 |
| .38920835+00 | .16250011+01 | .16877934+00 | .26707215+01 | .10953424+01 |
| .39269900+00 | .16257718+01 | .16669058+00 | .27123667+01 | .11234988+01 |
| .39531700+00 | .16263628+01 | .16512521+00 | .27449821+01 | .11454370+01 |
| .39793499+00 | .16269651+01 | .16355986+00 | .27788662+01 | .11681275+01 |
| .40055298+00 | .16275793+01 | .16199367+00 | .28141026+01 | .11916182+01 |
| .40317097+00 | .16282058+01 | .16042570+00 | .28507832+01 | .12159618+01 |
| .40578896+00 | .16288452+01 | .15885494+00 | .28890091+01 | .12412159+01 |
| .40840691+00 | .16294986+01 | .15728053+00 | .29288914+01 | .12674440+01 |
| .41102485+00 | .16301659+01 | .15570109+00 | .29705542+01 | .12947166+01 |
| .41364280+00 | .16308477+01 | .15411539+00 | .30141352+01 | .13231120+01 |
| .41626075+00 | .16315448+01 | .15252211+00 | .30597873+01 | .13527168+01 |

TABLE 112. (Concluded)

$$M_{\infty} = .29999765+01$$

$$\Theta_s = .26179938+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .41887670+00 | .16322579+01 | .15091988+00 | .31076823+01 | .13836281+01 |
| .42062400+00 | .16327428+01 | .14984597+00 | .31409527+01 | .14050147+01 |
| .42236929+00 | .16332353+01 | .14876687+00 | .31753684+01 | .14270657+01 |
| .42411459+00 | .16337360+01 | .14768210+00 | .32109974+01 | .14498193+01 |
| .42585789+00 | .16342452+01 | .14659106+00 | .32479149+01 | .14733178+01 |
| .42760619+00 | .16347634+01 | .14549317+00 | .32862028+01 | .14976070+01 |
| .42935049+00 | .16352908+01 | .14438778+00 | .33259499+01 | .15227367+01 |
| .43109579+00 | .16358279+01 | .14327418+00 | .33672551+01 | .15487621+01 |
| .43284108+00 | .16363753+01 | .14215162+00 | .34102257+01 | .15757431+01 |
| .43458638+00 | .16369334+01 | .14101933+00 | .34549816+01 | .16037465+01 |
| .43633168+00 | .16375028+01 | .13987636+00 | .35016547+01 | .16328457+01 |
| .43720433+00 | .16377919+01 | .13930060+00 | .35257558+01 | .16478315+01 |
| .43807698+00 | .16380842+01 | .13872177+00 | .35503925+01 | .16631225+01 |
| .43894963+00 | .16383795+01 | .13813980+00 | .35755860+01 | .16787304+01 |
| .43982228+00 | .16386782+01 | .13755451+00 | .36013588+01 | .16946678+01 |
| .44069493+00 | .16389802+01 | .13696573+00 | .36277340+01 | .17109473+01 |
| .44156758+00 | .16392857+01 | .13637334+00 | .36547374+01 | .17275832+01 |
| .44244023+00 | .16395948+01 | .13577718+00 | .36823957+01 | .17445903+01 |
| .44331288+00 | .16399076+01 | .13517703+00 | .37107366+01 | .17619839+01 |
| .44418553+00 | .16402242+01 | .13457274+00 | .37397906+01 | .17797807+01 |
| .44505817+00 | .16405448+01 | .13396417+00 | .37695903+01 | .17979987+01 |
| .44593082+00 | .16408695+01 | .13335104+00 | .38001697+01 | .18166567+01 |
| .44680347+00 | .16411984+01 | .13273310+00 | .38315656+01 | .18357748+01 |
| .44767612+00 | .16415317+01 | .13211016+00 | .38638176+01 | .18553748+01 |
| .44854877+00 | .16418696+01 | .13148195+00 | .38969682+01 | .18754601+01 |
| .44942142+00 | .16422124+01 | .13084821+00 | .39310626+01 | .18961153+01 |
| .45029407+00 | .16425600+01 | .13020869+00 | .39661499+01 | .19173074+01 |
| .45116672+00 | .16429129+01 | .12956306+00 | .40022830+01 | .19390854+01 |
| .45133519+00 | .16429817+01 | .12943766+00 | .40093840+01 | .19433599+01 |

$$.20265378-01 = \Delta S/R$$

$$.23159334+01 = P_s/P_{\infty}$$

$$.16417639+01 = \rho_s/\rho_{\infty}$$

$$.14106373+01 = T_s/T_{\infty}$$



TABLE 113. CONICAL FLOWFIELD  $\theta_s = 15.0$  DEG;  $M_\infty = 4.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .86132586+00 | .39999926+01 | .26179938+00 | .39199816+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .26179938+00 | .17226194+01 | .26179938+00 | .18660254+01 | .50000000+00 |
| .26529304+00 | .17226400+01 | .25835317+00 | .18825213+01 | .51146968+00 |
| .26878069+00 | .17227000+01 | .25499188+00 | .18995499+01 | .52322317+00 |
| .27227135+00 | .17227972+01 | .25170993+00 | .19171365+01 | .53527409+00 |
| .27576201+00 | .17229294+01 | .24850217+00 | .19353081+01 | .54763696+00 |
| .27925266+00 | .17230948+01 | .24536377+00 | .19540941+01 | .56032740+00 |
| .28274332+00 | .17232918+01 | .24229027+00 | .19735257+01 | .57336216+00 |
| .28623398+00 | .17235189+01 | .23927747+00 | .19936367+01 | .58675914+00 |
| .28972463+00 | .17237748+01 | .23632143+00 | .20144638+01 | .60053769+00 |
| .29321529+00 | .17240584+01 | .23341843+00 | .20360466+01 | .61471863+00 |
| .29670595+00 | .17243686+01 | .23056493+00 | .20584279+01 | .62932449+00 |
| .30019660+00 | .17247047+01 | .22775756+00 | .20816543+01 | .64437959+00 |
| .30368726+00 | .17250657+01 | .22499317+00 | .21057761+01 | .65991016+00 |
| .30717792+00 | .17254511+01 | .22226861+00 | .21308488+01 | .67594497+00 |
| .31066857+00 | .17258604+01 | .21958091+00 | .21569322+01 | .69251508+00 |
| .31415923+00 | .17262930+01 | .21692720+00 | .21840924+01 | .70965455+00 |
| .31677722+00 | .17266326+01 | .21495751+00 | .22052125+01 | .72290505+00 |
| .31939521+00 | .17269851+01 | .21300418+00 | .22270117+01 | .73651358+00 |
| .32201321+00 | .17273503+01 | .21106604+00 | .22495257+01 | .75049844+00 |
| .32463120+00 | .17277283+01 | .20914195+00 | .22727929+01 | .76487922+00 |
| .32724919+00 | .17281190+01 | .20723077+00 | .22968548+01 | .77967701+00 |
| .32986718+00 | .17285225+01 | .20533134+00 | .23217560+01 | .79491463+00 |
| .33248518+00 | .17289387+01 | .20344251+00 | .23475451+01 | .81061666+00 |
| .33510317+00 | .17293679+01 | .20156313+00 | .23742748+01 | .82680985+00 |
| .33772116+00 | .17298101+01 | .19969201+00 | .24020022+01 | .84352300+00 |
| .34033915+00 | .17302655+01 | .19782796+00 | .24307898+01 | .86078765+00 |
| .34295715+00 | .17307343+01 | .19596976+00 | .24597059+01 | .87863820+00 |
| .34557514+00 | .17312167+01 | .19411614+00 | .24918253+01 | .89711213+00 |
| .34819313+00 | .17317131+01 | .19226580+00 | .25242302+01 | .91625065+00 |
| .35081112+00 | .17322237+01 | .19041739+00 | .25580109+01 | .93609890+00 |
| .35342912+00 | .17327490+01 | .18856959+00 | .25932677+01 | .95670678+00 |
| .35604711+00 | .17332896+01 | .18673371+00 | .26176464+01 | .97089435+00 |
| .35866510+00 | .17338473+01 | .18481038+00 | .26427658+01 | .98546167+00 |
| .36128309+00 | .17344226+01 | .18286930+00 | .26686642+01 | .10004276+01 |
| .36390108+00 | .17349614+01 | .18086950+00 | .26953836+01 | .10158131+01 |
| .36651907+00 | .17354615+01 | .17886940+00 | .27229589+01 | .10316402+01 |
| .36913706+00 | .17359100+01 | .17686947+00 | .27514684+01 | .10479327+01 |
| .37175505+00 | .17364134+01 | .17490724+00 | .27809347+01 | .10647167+01 |
| .37437304+00 | .17368250+01 | .17296578+00 | .28114249+01 | .10820200+01 |
| .37699103+00 | .17372450+01 | .17103720+00 | .28430010+01 | .10998733+01 |

TABLE 113. (Concluded)

| $M_{\infty} = .39999926+01$ |                     | $\Theta_s = .26179938+00$ |                 |                 |
|-----------------------------|---------------------|---------------------------|-----------------|-----------------|
| $\underline{\Theta}$        | $\underline{M_1^*}$ | $\underline{\psi_1}$      | $\underline{x}$ | $\underline{r}$ |
| .37088217+00                | .17366737+01        | .17614409+00              | .28757305+01    | .11183094+01    |
| .37262747+00                | .17371116+01        | .17487826+00              | .29096877+01    | .11373649+01    |
| .37437277+00                | .17375589+01        | .17360546+00              | .29449548+01    | .11570792+01    |
| .37611806+00                | .17380161+01        | .17232480+00              | .29816179+01    | .11774959+01    |
| .37786336+00                | .17384835+01        | .17103540+00              | .30197782+01    | .11986627+01    |
| .37960866+00                | .17389618+01        | .16973626+00              | .30595441+01    | .12206327+01    |
| .38048131+00                | .17392052+01        | .16908275+00              | .30800664+01    | .12319370+01    |
| .38135396+00                | .17394515+01        | .16842636+00              | .31010365+01    | .12434646+01    |
| .38222661+00                | .17397008+01        | .16776698+00              | .31224715+01    | .12552237+01    |
| .38309926+00                | .17399532+01        | .16710444+00              | .31443897+01    | .12672232+01    |
| .38397191+00                | .17402087+01        | .16643862+00              | .31668106+01    | .12794726+01    |
| .38484456+00                | .17404675+01        | .16576928+00              | .31897549+01    | .12918917+01    |
| .38571721+00                | .17407296+01        | .16509630+00              | .32132445+01    | .13047612+01    |
| .38658985+00                | .17409952+01        | .16441946+00              | .32373021+01    | .13178219+01    |
| .38746250+00                | .17412643+01        | .16373855+00              | .32619527+01    | .13311760+01    |
| .38833515+00                | .17415372+01        | .16305340+00              | .32872225+01    | .13448359+01    |
| .38920780+00                | .17418138+01        | .16236371+00              | .33131396+01    | .13588152+01    |
| .39008045+00                | .17420944+01        | .16166931+00              | .33397337+01    | .13731280+01    |
| .39095310+00                | .17423790+01        | .16096994+00              | .33670371+01    | .13877900+01    |
| .39182575+00                | .17426679+01        | .16026531+00              | .33950840+01    | .14028173+01    |
| .39199815+00                | .17427255+01        | .16012546+00              | .34007164+01    | .14058311+01    |

$$.72392151+01 = \Delta S/R$$

$$.31784276+01 = P_s/P_{\infty}$$

$$.19442191+01 = \rho_s/\rho_{\infty}$$

$$.16348095+01 = T_s/T_{\infty}$$



TABLE 114. CONICAL FLOWFIELD  $\theta_s = 15.0$  DEG;  $M_\infty = 5.0$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .89196648+00 | .49999939+01 | .26179938+00 | .3620791+00  |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .26179938+00 | .17838995+01 | .26179938+00 | .18660254+01 | .50000000+00 |
| .26529004+00 | .17839209+01 | .25835300+00 | .18859256+01 | .51239461+00 |
| .26878069+00 | .17839831+01 | .25499057+00 | .19065769+01 | .52515874+00 |
| .27227135+00 | .17840837+01 | .25170565+00 | .19280227+01 | .53831357+00 |
| .27576201+00 | .17842209+01 | .24849227+00 | .19503100+01 | .55188206+00 |
| .27925266+00 | .17843928+01 | .24534490+00 | .19734900+01 | .56568909+00 |
| .28274332+00 | .17845978+01 | .24225836+00 | .19976189+01 | .58036189+00 |
| .28579764+00 | .17848033+01 | .23960372+00 | .20195584+01 | .59343091+00 |
| .28885197+00 | .17850323+01 | .23698885+00 | .20423163+01 | .60690074+00 |
| .29190629+00 | .17852842+01 | .23441080+00 | .20659418+01 | .62079488+00 |
| .29496062+00 | .17855584+01 | .23186672+00 | .20904879+01 | .63513673+00 |
| .29801494+00 | .17858545+01 | .22935387+00 | .21160130+01 | .64996000+00 |
| .30106927+00 | .17861721+01 | .22686957+00 | .21425808+01 | .66528893+00 |
| .30368726+00 | .17864611+01 | .22476091+00 | .21662359+01 | .67885709+00 |
| .30630525+00 | .17867654+01 | .22266968+00 | .21907564+01 | .69284520+00 |
| .30892324+00 | .17870851+01 | .22059426+00 | .22161947+01 | .70727787+00 |
| .31154124+00 | .17874201+01 | .21853306+00 | .22426080+01 | .72218193+00 |
| .31415923+00 | .17877703+01 | .21648445+00 | .22700582+01 | .73758653+00 |
| .31677722+00 | .17881359+01 | .21444682+00 | .22986145+01 | .75352377+00 |
| .31895888+00 | .17884524+01 | .21275599+00 | .23233096+01 | .76723664+00 |
| .32114054+00 | .17887796+01 | .21107068+00 | .23486722+01 | .78136569+00 |
| .32332220+00 | .17891179+01 | .20938988+00 | .23753537+01 | .79593475+00 |
| .32550386+00 | .17894672+01 | .20771259+00 | .24028094+01 | .81096961+00 |
| .32768552+00 | .17898278+01 | .20603776+00 | .24313014+01 | .82649675+00 |
| .32986718+00 | .17901999+01 | .20436431+00 | .24608963+01 | .84255299+00 |
| .33161251+00 | .17905060+01 | .20302578+00 | .24854152+01 | .85579694+00 |
| .33335784+00 | .17908198+01 | .20168681+00 | .25107280+01 | .86941737+00 |
| .33510315+00 | .17911418+01 | .20034681+00 | .25368781+01 | .88343424+00 |
| .33684845+00 | .17914722+01 | .19900512+00 | .25639136+01 | .89786950+00 |
| .33859375+00 | .17918108+01 | .19766104+00 | .25918870+01 | .91274714+00 |
| .34033905+00 | .17921578+01 | .19631388+00 | .26208549+01 | .92809294+00 |
| .34164802+00 | .17924238+01 | .19530100+00 | .26432704+01 | .93992632+00 |
| .34295700+00 | .17926949+01 | .19428560+00 | .26663080+01 | .95205158+00 |
| .34426597+00 | .17929710+01 | .19326733+00 | .26899976+01 | .96448232+00 |
| .34557495+00 | .17932525+01 | .19224583+00 | .27143713+01 | .97723303+00 |
| .34688392+00 | .17935393+01 | .19122069+00 | .27394642+01 | .99031960+00 |
| .34819289+00 | .17938318+01 | .19019150+00 | .27653137+01 | .10037590+01 |
| .34906554+00 | .17940300+01 | .18950293+00 | .27829868+01 | .10129234+01 |
| .34993819+00 | .17942308+01 | .18881223+00 | .28010263+01 | .10222582+01 |
| .35081084+00 | .17944342+01 | .18811927+00 | .28194461+01 | .10317697+01 |

TABLE 114. (Concluded)

$$M = .49999939 + j1$$

$$\Theta = .26179938+00$$

| $\theta$     | $M_1^*$      | $\psi_1$     | $\underline{x}$ | $\underline{r}$ |
|--------------|--------------|--------------|-----------------|-----------------|
| .35168349+00 | .17946404+01 | .18742392+00 | .28382599+01    | .10414639+01    |
| .35255614+00 | .17948495+01 | .18672600+00 | .28574827+01    | .10513477+00    |
| .35342879+00 | .17950613+01 | .18602536+00 | .28771304+01    | .10614282+01    |
| .35386511+00 | .17951684+01 | .18567397+00 | .28871188+01    | .10665445+01    |
| .35430144+00 | .17952761+01 | .18532184+00 | .28972197+01    | .10717128+01    |
| .35473776+00 | .17953846+01 | .18496894+00 | .29074352+01    | .10769340+01    |
| .35517409+00 | .17954940+01 | .18461527+00 | .29177679+01    | .10822093+01    |
| .35561041+00 | .17956040+01 | .18426077+00 | .29282199+01    | .10875396+01    |
| .35604674+00 | .17957149+01 | .18390545+00 | .29387937+01    | .10929261+01    |
| .35648306+00 | .17958266+01 | .18354928+00 | .29494919+01    | .10983699+00    |
| .35691939+00 | .17959390+01 | .18319221+00 | .29603171+01    | .11038722+01    |
| .35735571+00 | .17960523+01 | .18283424+00 | .29712718+01    | .11094340+01    |
| .35779203+00 | .17961664+01 | .18247637+00 | .29823590+01    | .11150568+01    |
| .35822836+00 | .17962814+01 | .18211550+00 | .29935613+01    | .11207416+01    |
| .35866468+00 | .17963972+01 | .18175463+00 | .30049417+01    | .11264899+01    |
| .35910101+00 | .17965139+01 | .18139279+00 | .30164435+01    | .11323030+01    |
| .35953733+00 | .17966314+01 | .18102989+00 | .30280896+01    | .11381823+01    |
| .35997366+00 | .17967498+01 | .18066591+00 | .30398833+01    | .11441293+01    |
| .36040998+00 | .17968692+01 | .18030082+00 | .30518277+01    | .11501453+01    |
| .36084631+00 | .17969895+01 | .17993461+00 | .30639265+01    | .11562320+01    |
| .36128263+00 | .17971107+01 | .17956720+00 | .30761831+01    | .11623909+01    |
| .36171896+00 | .17972329+01 | .17919864+00 | .30886015+01    | .11686237+01    |
| .36207910+00 | .17973345+01 | .17889347+00 | .30989763+01    | .11738252+01    |

$$\bullet 16270484 \div 00 = \Delta S/R$$

$$.42720355 + 01 = P_s/P_{\infty}$$

$$.22392768 + 0j = \rho_S / \rho_{\infty}$$

$$.19077747 \cdot 01 = T_s/T_\infty$$



TABLE 115. CONICAL FLOWFIELD  $\theta_s = 15.0$  DEG;  $M_\infty = 6.0$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .91009401+00 | .59999967+01 | .26179938+00 | .34487812+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .26179938+00 | .18201539+01 | .26179938+00 | .18660264+01 | .50000000+00 |
| .26441737+00 | .18201662+01 | .25920634+00 | .18829010+01 | .50980883+00 |
| .26703537+00 | .18202023+01 | .25666120+00 | .19003051+01 | .51966460+00 |
| .26965336+00 | .18202612+01 | .25416063+00 | .19182628+01 | .53017902+00 |
| .27227135+00 | .18203420+01 | .25170173+00 | .19368020+01 | .54076480+00 |
| .27488934+00 | .18204438+01 | .24926170+00 | .19559519+01 | .55163647+00 |
| .27750733+00 | .18205658+01 | .24689780+00 | .19757445+01 | .56280558+00 |
| .28012533+00 | .18207075+01 | .24454777+00 | .19962140+01 | .57429084+00 |
| .28274332+00 | .18208682+01 | .24222844+00 | .20173973+01 | .58610605+00 |
| .28536131+00 | .18210484+01 | .24003188+00 | .20396244+01 | .59822247+00 |
| .28797930+00 | .18211772+01 | .23842755+00 | .20644002+01 | .60659140+00 |
| .28928630+00 | .18213504+01 | .23655363+00 | .20737513+01 | .61722693+00 |
| .29146996+00 | .18215358+01 | .23469646+00 | .20937068+01 | .62814201+00 |
| .29365362+00 | .18217334+01 | .23285422+00 | .21142969+01 | .63935055+00 |
| .29583728+00 | .18219429+01 | .23102592+00 | .21355555+01 | .65086748+00 |
| .29802094+00 | .18221642+01 | .22921037+00 | .21575182+01 | .66270885+00 |
| .30020460+00 | .18223974+01 | .22750641+00 | .21802239+01 | .67489197+00 |
| .30238826+00 | .18226923+01 | .22590708+00 | .21989513+01 | .68489699+00 |
| .30457192+00 | .18227949+01 | .22454125+00 | .22182041+01 | .69514295+00 |
| .30675558+00 | .18230049+01 | .22311717+00 | .22380068+01 | .70564073+00 |
| .30893924+00 | .18232226+01 | .22169794+00 | .22583857+01 | .71640205+00 |
| .31112290+00 | .18234475+01 | .22028294+00 | .22793690+01 | .72743935+00 |
| .31330656+00 | .18236806+01 | .21887156+00 | .23009873+01 | .73876610+00 |
| .31549022+00 | .18239212+01 | .21746314+00 | .23232728+01 | .75039657+00 |
| .31767388+00 | .18241696+01 | .21605704+00 | .23462606+01 | .76234619+00 |
| .31985754+00 | .18244361+01 | .21500359+00 | .23639852+01 | .77152783+00 |
| .32204120+00 | .18245570+01 | .21395078+00 | .23821430+01 | .78090581+00 |
| .32422486+00 | .18247525+01 | .21289830+00 | .24007523+01 | .79048801+00 |
| .32640852+00 | .18249625+01 | .21184587+00 | .24196321+01 | .80028284+00 |
| .32859218+00 | .18251723+01 | .21079316+00 | .24394029+01 | .81029524+00 |
| .33077584+00 | .18253869+01 | .20973986+00 | .24594664+01 | .82054662+00 |
| .33295950+00 | .18256067+01 | .20868567+00 | .24801056+01 | .83103501+00 |
| .33514316+00 | .18258315+01 | .20763019+00 | .25012854+01 | .84177526+00 |
| .33732682+00 | .18259841+01 | .20662565+00 | .25157298+01 | .84908105+00 |
| .33951048+00 | .18261389+01 | .20622027+00 | .25304432+01 | .85650741+00 |
| .34169414+00 | .18262961+01 | .20551394+00 | .25454347+01 | .86405824+00 |
| .34387780+00 | .18264556+01 | .20480654+00 | .25607131+01 | .87173738+00 |
| .34606146+00 | .18266174+01 | .20409795+00 | .25762880+01 | .87954902+00 |
| .34824512+00 | .18267816+01 | .20338805+00 | .25921695+01 | .88749743+00 |
| .35042878+00 | .18269483+01 | .20267670+00 | .26083681+01 | .89558724+00 |

TABLE 115. (Concluded)

$$M_{\odot} = .59999967+01$$

$$\Theta_s = .26179938+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .33161234+00 | .18271174+01 | .20196376+00 | .26248947+01 | .90382310+00 |
| .33204867+00 | .18272029+01 | .20160668+00 | .26332846+01 | .90799733+00 |
| .33248499+00 | .18272891+01 | .20124914+00 | .26417609+01 | .91221001+00 |
| .33292131+00 | .18273759+01 | .20089114+00 | .26503252+01 | .91646177+00 |
| .33335764+00 | .18274633+01 | .20053265+00 | .26589791+01 | .92075331+00 |
| .33379396+00 | .18275516+01 | .20017366+00 | .26677241+01 | .92508532+00 |
| .33423029+00 | .18276402+01 | .19981416+00 | .26765620+01 | .92945852+00 |
| .33466661+00 | .18277296+01 | .19945411+00 | .26854945+01 | .93387362+00 |
| .33510294+00 | .18278198+01 | .19909351+00 | .26945232+01 | .93833141+00 |
| .33553926+00 | .18279106+01 | .19873232+00 | .27036503+01 | .94283272+00 |
| .33597559+00 | .18280021+01 | .19837053+00 | .27126775+01 | .94737832+00 |
| .33641191+00 | .18280943+01 | .19800813+00 | .27222065+01 | .95196699+00 |
| .33684824+00 | .18281872+01 | .19764510+00 | .27316394+01 | .95660554+00 |
| .33728456+00 | .18282808+01 | .19728140+00 | .27411783+01 | .96128894+00 |
| .33772089+00 | .18283751+01 | .19691701+00 | .27508252+01 | .96602004+00 |
| .33815721+00 | .18284702+01 | .19655192+00 | .27605824+01 | .97079978+00 |
| .33859354+00 | .18285660+01 | .19618609+00 | .27704522+01 | .97562916+00 |
| .33902986+00 | .18286626+01 | .19581950+00 | .27804365+01 | .98050903+00 |
| .33946618+00 | .18287599+01 | .19545213+00 | .27905380+01 | .98544048+00 |
| .33990251+00 | .18288581+01 | .19508395+00 | .28007590+01 | .99042453+00 |
| .34033883+00 | .18289569+01 | .19471494+00 | .28111019+01 | .99546220+00 |
| .34077516+00 | .18290566+01 | .19434507+00 | .28215695+01 | .10005547+01 |
| .34121148+00 | .18291571+01 | .19397431+00 | .28321643+01 | .10057030+01 |
| .34164781+00 | .18292584+01 | .19360264+00 | .28428890+01 | .10109085+01 |
| .34208413+00 | .18293605+01 | .19323002+00 | .28537467+01 | .10161722+01 |
| .34252046+00 | .18294635+01 | .19285643+00 | .28647400+01 | .10214954+01 |
| .34295678+00 | .18295673+01 | .19248183+00 | .28758722+01 | .10268794+01 |
| .34339311+00 | .18296720+01 | .19210620+00 | .28871462+01 | .10323256+01 |
| .34382943+00 | .18297775+01 | .19172951+00 | .28985653+01 | .10378352+01 |
| .34426576+00 | .18298840+01 | .19135172+00 | .29101328+01 | .10434097+01 |
| .34470208+00 | .18299913+01 | .19097279+00 | .29218524+01 | .10490507+01 |
| .34487812+00 | .18300349+01 | .19081958+00 | .29266246+01 | .10513458+01 |

$$.28508362+00 = \Delta S/R$$

$$.65948872+01 = P_s/P_{\infty}$$

$$.25082827+01 = \rho_s/\rho_{\infty}$$

$$.22325781+01 = T_s/T_{\infty}$$



TABLE 116. CONICAL FLOWFIELD  $\theta_s = 15.0$  DEG;  $M_\infty = 8.0$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .92934030+00 | .79999996+01 | .26179938+00 | .32691389+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .26179938+00 | .18586458+01 | .26179938+00 | .18660254+01 | .50000000+00 |
| .26354471+00 | .18586514+01 | .26006522+00 | .18791237+01 | .50702646+00 |
| .26529004+00 | .18586680+01 | .25835259+00 | .18925328+01 | .51418976+00 |
| .26703537+00 | .18586952+01 | .25666037+00 | .19062642+01 | .52149484+00 |
| .26878069+00 | .18587328+01 | .25498744+00 | .19203300+01 | .52894699+00 |
| .27052602+00 | .18587805+01 | .25333277+00 | .19347434+01 | .53655182+00 |
| .27227135+00 | .18588381+01 | .25169534+00 | .19495178+01 | .54431513+00 |
| .27401668+00 | .18589052+01 | .25007419+00 | .19646676+01 | .55224313+00 |
| .27576201+00 | .18589817+01 | .24846837+00 | .19802084+01 | .56034246+00 |
| .27750733+00 | .18590674+01 | .24687698+00 | .19961563+01 | .56862003+00 |
| .27925266+00 | .18591622+01 | .24529913+00 | .20125284+01 | .57708318+00 |
| .28099799+00 | .18592659+01 | .24373396+00 | .20293433+01 | .58573980+00 |
| .28274332+00 | .18593784+01 | .24218063+00 | .20466205+01 | .59459617+00 |
| .28448865+00 | .18594995+01 | .24063829+00 | .20643811+01 | .60366721+00 |
| .28623398+00 | .18596292+01 | .23910615+00 | .20826471+01 | .61295632+00 |
| .28797930+00 | .18597675+01 | .23758339+00 | .21014422+01 | .62247549+00 |
| .28972880+00 | .18598767+01 | .23644699+00 | .21159015+01 | .62977241+00 |
| .29057730+00 | .18599906+01 | .23531508+00 | .21306841+01 | .63720960+00 |
| .29190629+00 | .18601093+01 | .23418732+00 | .21456023+01 | .64479218+00 |
| .29321529+00 | .18602327+01 | .23306338+00 | .21612689+01 | .65252547+00 |
| .29452429+00 | .18603608+01 | .23194291+00 | .21770973+01 | .66041517+00 |
| .29583328+00 | .18604936+01 | .23082558+00 | .21933014+01 | .66846709+00 |
| .29714228+00 | .18606311+01 | .22971105+00 | .22098964+01 | .67668756+00 |
| .29845127+00 | .18607734+01 | .22859897+00 | .22268984+01 | .68508333+00 |
| .29976027+00 | .18609204+01 | .22748898+00 | .22443241+01 | .69366132+00 |
| .30106927+00 | .18610723+01 | .22638074+00 | .22621917+01 | .70242910+00 |
| .30237826+00 | .18612289+01 | .22527387+00 | .22805201+01 | .71139459+00 |
| .30368726+00 | .18613905+01 | .22416801+00 | .22993295+01 | .72056612+00 |
| .30499626+00 | .18615570+01 | .22306278+00 | .23186418+01 | .72995274+00 |
| .30630525+00 | .18617284+01 | .22195779+00 | .23384798+01 | .73956394+00 |
| .30761425+00 | .18619049+01 | .22085263+00 | .23588684+01 | .74941001+00 |
| .30892325+00 | .18620254+01 | .22011557+00 | .23727797+01 | .75610987+00 |
| .30935956+00 | .18621486+01 | .21937815+00 | .23869554+01 | .76292223+00 |
| .31023221+00 | .18622740+01 | .21864022+00 | .24014044+01 | .76985077+00 |
| .31110486+00 | .18624019+01 | .21790165+00 | .24161359+01 | .77689923+00 |
| .31197751+00 | .18625320+01 | .21716229+00 | .24311595+01 | .78407157+00 |
| .31285016+00 | .18626647+01 | .21642202+00 | .24464851+01 | .79137187+00 |
| .31372281+00 | .18627997+01 | .21568068+00 | .24621235+01 | .79880451+00 |
| .31459546+00 | .18629373+01 | .21493813+00 | .24780855+01 | .80637397+00 |
| .31546811+00 | .18630774+01 | .21419421+00 | .24943830+01 | .81408513+00 |





/// TABLE 117. CONICAL FLOWFIELD  $\theta_s = 15.0$  DEG;  $M_\infty = 10.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .95871360+00 | .99999053+01 | .26179938+00 | .31824681+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .26179938+00 | .18773920+01 | .26179938+00 | .18660254+01 | .50000000+00 |
| .26310838+00 | .18773952+01 | .26049668+00 | .18767306+01 | .50550235+00 |
| .26441737+00 | .18774047+01 | .25920621+00 | .18876409+01 | .51109220+00 |
| .26572637+00 | .18774203+01 | .25792742+00 | .18987625+01 | .51677207+00 |
| .26703537+00 | .18774420+01 | .25665977+00 | .19101016+01 | .52254470+00 |
| .26834436+00 | .18774696+01 | .25540277+00 | .19216655+01 | .52841285+00 |
| .26965336+00 | .18775029+01 | .25415592+00 | .19334608+01 | .53437952+00 |
| .27096236+00 | .18775418+01 | .25291874+00 | .19454951+01 | .54044779+00 |
| .27227135+00 | .18775864+01 | .25169076+00 | .19577762+01 | .54662089+00 |
| .27358035+00 | .18776364+01 | .25047153+00 | .19703121+01 | .55290218+00 |
| .27488934+00 | .18776919+01 | .24926060+00 | .19831116+01 | .55929527+00 |
| .27619834+00 | .18777526+01 | .24805755+00 | .19961835+01 | .56580383+00 |
| .27750733+00 | .18778186+01 | .24686194+00 | .20095374+01 | .57243174+00 |
| .27881633+00 | .18778899+01 | .24567336+00 | .20231832+01 | .57918316+00 |
| .28012533+00 | .18779663+01 | .24449139+00 | .20371315+01 | .58606239+00 |
| .28143432+00 | .18780477+01 | .24331563+00 | .20513930+01 | .59307390+00 |
| .28274332+00 | .18781343+01 | .24214568+00 | .20659799+01 | .60022259+00 |
| .28405232+00 | .18782259+01 | .24098113+00 | .20809038+01 | .60751333+00 |
| .28536131+00 | .18783224+01 | .23982159+00 | .20961782+01 | .61495153+00 |
| .28667031+00 | .18784240+01 | .23866666+00 | .21118166+01 | .62254277+00 |
| .28797930+00 | .18785305+01 | .23751594+00 | .21278335+01 | .63029292+00 |
| .28885197+00 | .1878643+01  | .23675095+00 | .21387293+01 | .63555110+00 |
| .28972463+00 | .18786803+01 | .23598753+00 | .21498049+01 | .64088463+00 |
| .29059730+00 | .18787585+01 | .23522557+00 | .21610655+01 | .64629557+00 |
| .29146996+00 | .18788389+01 | .23446496+00 | .21725161+01 | .65178600+00 |
| .29234263+00 | .18789214+01 | .23370557+00 | .21841619+01 | .65735805+00 |
| .29321529+00 | .18790063+01 | .23294728+00 | .21960089+01 | .66301410+00 |
| .29408795+00 | .18790933+01 | .23218997+00 | .22080628+01 | .66875650+00 |
| .29496062+00 | .18791826+01 | .23143351+00 | .22203297+01 | .67458767+00 |
| .29583328+00 | .18792741+01 | .23067779+00 | .22328161+01 | .68051027+00 |
| .29670595+00 | .18793679+01 | .22992267+00 | .22455286+01 | .68652691+00 |
| .29757861+00 | .18794639+01 | .22916804+00 | .22584741+01 | .69264045+00 |
| .29845127+00 | .18795622+01 | .22841374+00 | .22716601+01 | .69885384+00 |
| .29932394+00 | .18796629+01 | .22765966+00 | .22850941+01 | .70517008+00 |
| .30019660+00 | .18797658+01 | .22690566+00 | .22987840+01 | .71159245+00 |
| .30106927+00 | .18798710+01 | .22615160+00 | .23127382+01 | .71812423+00 |
| .30194193+00 | .18799786+01 | .22539734+00 | .23269657+01 | .72476902+00 |
| .30281459+00 | .18800888+01 | .22464275+00 | .23414754+01 | .73153042+00 |
| .30368724+00 | .18802015+01 | .22388768+00 | .23562773+01 | .73841240+00 |
| .30455989+00 | .18803166+01 | .22313197+00 | .23713814+01 | .74541697+00 |



TABLE 117. (Concluded)

$$M_{\infty} = .99999053+01$$

$$\Theta_s = .26179938+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .30543254+00 | .18804343+01 | .22237546+00 | .23867985+01 | .75255445+00 |
| .30586886+00 | .18804940+01 | .22199685+00 | .23946279+01 | .75617190+00 |
| .30630518+00 | .18805544+01 | .22161799+00 | .24025399+01 | .75982333+00 |
| .30674151+00 | .18806154+01 | .22123884+00 | .24105359+01 | .76350928+00 |
| .30717783+00 | .18806771+01 | .22085940+00 | .24186175+01 | .76723035+00 |
| .30761416+00 | .18807393+01 | .22047963+00 | .24267662+01 | .77098721+00 |
| .30805048+00 | .18808023+01 | .22009951+00 | .24350438+01 | .77478049+00 |
| .30848681+00 | .18808658+01 | .21971903+00 | .24433918+01 | .77861086+00 |
| .30892313+00 | .18809301+01 | .21933815+00 | .24518321+01 | .78247903+00 |
| .30935946+00 | .18809950+01 | .21895686+00 | .24603663+01 | .78638566+00 |
| .30979578+00 | .18810606+01 | .21857513+00 | .24689963+01 | .79033151+00 |
| .31023211+00 | .18811268+01 | .21819295+00 | .24777241+01 | .79431731+00 |
| .31066843+00 | .18811937+01 | .21781026+00 | .24865515+01 | .79834384+00 |
| .31110476+00 | .18812614+01 | .21742710+00 | .24954805+01 | .80241190+00 |
| .31154108+00 | .18813297+01 | .21704338+00 | .25045130+01 | .80652220+00 |
| .31197741+00 | .18813987+01 | .21665910+00 | .25136514+01 | .81067569+00 |
| .31241373+00 | .18814684+01 | .21627423+00 | .25228978+01 | .81487318+00 |
| .31285005+00 | .18815388+01 | .21588875+00 | .25322543+01 | .81911558+00 |
| .31328638+00 | .18816100+01 | .21550263+00 | .25417233+01 | .82340377+00 |
| .31372270+00 | .18816819+01 | .21511584+00 | .25513071+01 | .82773868+00 |
| .31415903+00 | .18817545+01 | .21472834+00 | .25610082+01 | .83212133+00 |
| .31459535+00 | .18818278+01 | .21434012+00 | .25708292+01 | .83655266+00 |
| .31503168+00 | .18819020+01 | .21395114+00 | .25807726+01 | .84103373+00 |
| .31546800+00 | .18819769+01 | .21356137+00 | .25908412+01 | .84556563+00 |
| .31590433+00 | .18820526+01 | .21317078+00 | .26010377+01 | .85014937+00 |
| .31634065+00 | .18821290+01 | .21277933+00 | .26113651+01 | .85478622+00 |
| .31677698+00 | .18822062+01 | .21238700+00 | .26218262+01 | .85947719+00 |
| .31721330+00 | .18822843+01 | .21199373+00 | .26324244+01 | .86422364+00 |
| .31764963+00 | .18823631+01 | .21159952+00 | .26431627+01 | .86902679+00 |
| .31808595+00 | .18824428+01 | .21120431+00 | .26540443+01 | .87388785+00 |
| .31852461+00 | .18824724+01 | .21105834+00 | .26580929+01 | .87569490+00 |

$$.92834389+00 = \Delta S/R$$

$$.13283011+02 = P_s/P_{\infty}$$

$$.32560402+01 = \rho_s/\rho_{\infty}$$

$$.40794985+01 = T_s/T_{\infty}$$

TABLE 118. CONICAL FLOWFIELD  $\theta_s = 15.0$  DEG;  $M_\infty = 12.5$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .94488274+00 | .12500000+02 | .26179938+00 | .31256321+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .26179938+00 | .18897301+01 | .26179938+00 | .18660254+01 | .50000000+00 |
| .26267204+00 | .18897315+01 | .26092953+00 | .18736143+01 | .50378624+00 |
| .26354471+00 | .18897358+01 | .26006516+00 | .18813054+01 | .50761513+00 |
| .26441737+00 | .18897428+01 | .25920615+00 | .18891006+01 | .51148742+00 |
| .26529004+00 | .18897526+01 | .25835226+00 | .18970023+01 | .51540409+00 |
| .26616270+00 | .18897652+01 | .25750336+00 | .19050128+01 | .51936608+00 |
| .26703537+00 | .18897804+01 | .25665927+00 | .19131343+01 | .52337430+00 |
| .26790803+00 | .18897982+01 | .25581983+00 | .19213695+01 | .52742981+00 |
| .26878069+00 | .18898186+01 | .25498486+00 | .19297208+01 | .53153363+00 |
| .26965336+00 | .18898416+01 | .25415426+00 | .19381909+01 | .53568683+00 |
| .27052602+00 | .18898672+01 | .25332782+00 | .19467824+01 | .53989052+00 |
| .27139869+00 | .18898952+01 | .25250541+00 | .19554983+01 | .54414582+00 |
| .27227135+00 | .18899258+01 | .25168688+00 | .19643414+01 | .54845393+00 |
| .27314401+00 | .18899588+01 | .25087209+00 | .19733146+01 | .55281604+00 |
| .27401668+00 | .18899943+01 | .25006089+00 | .19824212+01 | .55723342+00 |
| .27488934+00 | .18900322+01 | .24925314+00 | .19916643+01 | .56170739+00 |
| .27576201+00 | .18900725+01 | .24844869+00 | .20010473+01 | .56623927+00 |
| .27663467+00 | .18901151+01 | .24764742+00 | .20105737+01 | .57083048+00 |
| .27750733+00 | .18901601+01 | .24684918+00 | .20202470+01 | .57548245+00 |
| .27838000+00 | .18902075+01 | .24605384+00 | .20300710+01 | .58019669+00 |
| .27925266+00 | .18902572+01 | .24526127+00 | .20400496+01 | .58497474+00 |
| .28012533+00 | .18903092+01 | .24447132+00 | .20501867+01 | .58981826+00 |
| .28099799+00 | .18903636+01 | .24368386+00 | .20604865+01 | .59472682+00 |
| .28187066+00 | .18904202+01 | .24289877+00 | .20709534+01 | .59970823+00 |
| .28274332+00 | .18904792+01 | .24211591+00 | .20815919+01 | .60475830+00 |
| .28361598+00 | .18905404+01 | .24133515+00 | .20924067+01 | .60988087+00 |
| .28448865+00 | .18906039+01 | .24055636+00 | .21034025+01 | .61507768+00 |
| .28536131+00 | .18906697+01 | .23977940+00 | .21145846+01 | .62033139+00 |
| .28623398+00 | .18907378+01 | .23900414+00 | .21259583+01 | .62570349+00 |
| .28710664+00 | .18908082+01 | .23823046+00 | .21375288+01 | .63113633+00 |
| .28797930+00 | .18908808+01 | .23745820+00 | .21493021+01 | .63665222+00 |
| .28885197+00 | .18909558+01 | .23668725+00 | .21612841+01 | .64225357+00 |
| .28972463+00 | .18910330+01 | .23591746+00 | .21734812+01 | .64794283+00 |
| .29059730+00 | .18911125+01 | .23514871+00 | .21858999+01 | .65372263+00 |
| .29146996+00 | .18911943+01 | .23438084+00 | .21985468+01 | .65959559+00 |
| .29234263+00 | .18912784+01 | .23361373+00 | .22114292+01 | .66556457+00 |
| .29321529+00 | .18913649+01 | .23284722+00 | .22245547+01 | .67163280+00 |
| .29408795+00 | .18914537+01 | .23208118+00 | .22379309+01 | .67780265+00 |
| .29496062+00 | .18915448+01 | .23131546+00 | .22515663+01 | .68407807+00 |
| .29583328+00 | .18916383+01 | .23054991+00 | .22654693+01 | .69046218+00 |



TABLE 118. (Concluded)

$$M_{\infty} = .12500000+02$$

$$\Theta_s = .26179938+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .29670595+00 | .18917342+01 | .22978438+00 | .22796488+01 | .67695851+00 |
| .29757861+00 | .18918325+01 | .22901871+00 | .22941146+01 | .70357086+00 |
| .29845127+00 | .18919354+01 | .22825277+00 | .23088762+01 | .71030296+00 |
| .29932392+00 | .18920369+01 | .22748637+00 | .23235444+01 | .71715909+00 |
| .30019657+00 | .18921429+01 | .22671935+00 | .23393303+01 | .72414351+00 |
| .30106721+00 | .18922514+01 | .22595154+00 | .23550455+01 | .73126085+00 |
| .30194186+00 | .18923625+01 | .22518275+00 | .23711023+01 | .73851588+00 |
| .30281451+00 | .18924761+01 | .22441281+00 | .23875137+01 | .74591366+00 |
| .30368716+00 | .18925924+01 | .22364153+00 | .24042933+01 | .75345949+00 |
| .30455989+00 | .18927115+01 | .22286872+00 | .24214558+01 | .76115913+00 |
| .30543246+00 | .18928329+01 | .22209416+00 | .24390164+01 | .76901850+00 |
| .30630511+00 | .18929573+01 | .22131766+00 | .24569912+01 | .77704382+00 |
| .30717776+00 | .18930844+01 | .22053900+00 | .24753978+01 | .78524190+00 |
| .30805041+00 | .18932144+01 | .21975799+00 | .24942544+01 | .79361988+00 |
| .30892306+00 | .18933474+01 | .21897425+00 | .25135807+01 | .80218530+00 |
| .30979578+00 | .18934833+01 | .21818768+00 | .25333972+01 | .81094617+00 |
| .31066836+00 | .18936223+01 | .21739797+00 | .25537263+01 | .81991111+00 |
| .31154088+00 | .18937645+01 | .21660485+00 | .25745921+01 | .82908937+00 |
| .31241366+00 | .18939098+01 | .21580803+00 | .25960195+01 | .83849065+00 |
| .31328621+00 | .18939350+01 | .21567107+00 | .25997501+01 | .84012499+00 |

$$.13497845+01 = \Delta S/R$$

$$.20024124+02 = P_s/P_{\infty}$$

$$.35187882+01 = \rho_s/\rho_{\infty}$$

$$.56906308+01 = T_s/T_{\infty}$$

TABLE 119. CONICAL FLOWFIELD  $\theta_s = 15.0$  DEG;  $M_\infty = 15.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .94829237+00 | .15000006+02 | .26179938+00 | .30942741+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .26179938+00 | .18965492+01 | .26179938+00 | .18660254+01 | .50000000+00 |
| .26267204+00 | .18965506+01 | .26092953+00 | .18739108+01 | .50386596+00 |
| .26354471+00 | .18965549+01 | .26006516+00 | .18819061+01 | .50777721+00 |
| .26441737+00 | .18965620+01 | .25920611+00 | .18900136+01 | .51173463+00 |
| .26529004+00 | .18965718+01 | .25835217+00 | .18982359+01 | .51573925+00 |
| .26616270+00 | .18965844+01 | .25750317+00 | .19065754+01 | .51979209+00 |
| .26703537+00 | .18965997+01 | .25665894+00 | .19150350+01 | .52389426+00 |
| .26790803+00 | .18966176+01 | .25581931+00 | .19236173+01 | .52804686+00 |
| .26878069+00 | .18966381+01 | .25498411+00 | .19323253+01 | .53225103+00 |
| .26965336+00 | .18966612+01 | .25415317+00 | .19411618+01 | .53650796+00 |
| .27052602+00 | .18966868+01 | .25332633+00 | .19501301+01 | .54081891+00 |
| .27139869+00 | .18967150+01 | .25250344+00 | .19592331+01 | .54518509+00 |
| .27227135+00 | .18967457+01 | .25168434+00 | .19684743+01 | .54960786+00 |
| .27314401+00 | .18967789+01 | .25086887+00 | .19778570+01 | .55408857+00 |
| .27401666+00 | .18968145+01 | .25005689+00 | .19873848+01 | .55862863+00 |
| .27488934+00 | .18968526+01 | .24924823+00 | .19970614+01 | .56322952+00 |
| .27576201+00 | .18968931+01 | .24844276+00 | .20068905+01 | .56789275+00 |
| .27663467+00 | .18969360+01 | .24764033+00 | .20168762+01 | .57261984+00 |
| .27750733+00 | .18969812+01 | .24684079+00 | .20270224+01 | .57741248+00 |
| .27838000+00 | .18970289+01 | .24604400+00 | .20373336+01 | .58227235+00 |
| .27925266+00 | .18970789+01 | .24524982+00 | .20478142+01 | .58720121+00 |
| .28012533+00 | .18971312+01 | .24445810+00 | .20584687+01 | .59220090+00 |
| .28099799+00 | .18971859+01 | .24366869+00 | .20693019+01 | .59727325+00 |
| .28187066+00 | .18972430+01 | .24288147+00 | .20803189+01 | .60242030+00 |
| .28274332+00 | .18973023+01 | .24209628+00 | .20915248+01 | .60764407+00 |
| .28361598+00 | .18973640+01 | .24131299+00 | .21029252+01 | .61294675+00 |
| .28448865+00 | .18974280+01 | .24053145+00 | .21145257+01 | .61833052+00 |
| .28536131+00 | .18974944+01 | .23975152+00 | .21263321+01 | .62379771+00 |
| .28623398+00 | .18975630+01 | .23897306+00 | .21383506+01 | .62935077+00 |
| .28710664+00 | .18976340+01 | .23819592+00 | .21505877+01 | .63499215+00 |
| .28797930+00 | .18977073+01 | .23741996+00 | .21630501+01 | .64072457+00 |
| .28885197+00 | .18977830+01 | .23664503+00 | .21757450+01 | .64655080+00 |
| .28972463+00 | .18978610+01 | .23587098+00 | .21886794+01 | .65247360+00 |
| .29059730+00 | .18979413+01 | .23509767+00 | .22018612+01 | .65849607+00 |
| .29146996+00 | .18980240+01 | .23432494+00 | .22152986+01 | .66462135+00 |
| .29234263+00 | .18981091+01 | .23355263+00 | .22289999+01 | .67085274+00 |
| .29321529+00 | .18981965+01 | .23278060+00 | .22429742+01 | .67719375+00 |
| .29408795+00 | .18982864+01 | .23200867+00 | .22572306+01 | .68364795+00 |
| .29496062+00 | .18983788+01 | .23123669+00 | .22717792+01 | .69021922+00 |
| .29583328+00 | .18984735+01 | .23046450+00 | .22866300+01 | .69691149+00 |

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TABLE 119. (Concluded)

$$M_{\infty} = .15000006+02$$

$$\Theta_s = .26179938+00$$

| $\Theta$     | $M^*_1$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .29670593+00 | .18985711+01 | .22969192+00 | .23017940+01 | .70372893+00 |
| .29757858+00 | .18986712+01 | .22891879+00 | .23172826+01 | .71067607+00 |
| .29845123+00 | .18987739+01 | .22814491+00 | .23331083+01 | .71775763+00 |
| .29932388+00 | .18988791+01 | .22737009+00 | .23492835+01 | .72497849+00 |
| .30019653+00 | .18989868+01 | .22659415+00 | .23658217+01 | .73234387+00 |
| .30106918+00 | .18990973+01 | .22581689+00 | .23827375+01 | .73985933+00 |
| .30194183+00 | .18992104+01 | .22503810+00 | .24000455+01 | .74753057+00 |
| .30281448+00 | .18993262+01 | .22425758+00 | .24177622+01 | .75536386+00 |
| .30368713+00 | .18994448+01 | .22347509+00 | .24359043+01 | .76336568+00 |
| .30455977+00 | .18995663+01 | .22269042+00 | .24544900+01 | .77154300+00 |
| .30499610+00 | .18996281+01 | .22229719+00 | .24639550+01 | .77569969+00 |
| .30543242+00 | .18996906+01 | .22190332+00 | .24735384+01 | .77990313+00 |
| .30586875+00 | .18997538+01 | .22150878+00 | .24832425+01 | .78415420+00 |
| .30630507+00 | .18998178+01 | .22111354+00 | .24930702+01 | .78845399+00 |
| .30674140+00 | .18998826+01 | .22071757+00 | .25030242+01 | .79280355+00 |
| .30717772+00 | .18999481+01 | .22032083+00 | .25131073+01 | .79720396+00 |
| .30761405+00 | .19000144+01 | .21992328+00 | .25233225+01 | .80165634+00 |
| .30805037+00 | .19000814+01 | .21952490+00 | .25336728+01 | .80616187+00 |
| .30848670+00 | .19001492+01 | .21912564+00 | .25441616+01 | .81072183+00 |
| .30892302+00 | .19002179+01 | .21872547+00 | .25547919+01 | .81533736+00 |
| .30935935+00 | .19002873+01 | .21832434+00 | .25655673+01 | .82000985+00 |
| .30942741+00 | .19002962+01 | .21826168+00 | .25672615+01 | .82074396+00 |

$$.17473664+01 = \Delta S/R$$

$$.28260013+02 = P_s/P_{\infty}$$

$$.36908658+01 = \rho_s/\rho_{\infty}$$

$$.76567436+01 = T_s/T_{\infty}$$



TABLE 120. CONICAL FLOWFIELD  $\theta_s = 15.0$  DEG;  $M_\infty = 17.5$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .95036883+00 | .17499992+02 | .26179938+00 | .30751919+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .26179938+00 | .19007020+01 | .26179938+00 | .18660254+01 | .50000000+00 |
| .26267204+00 | .19007035+01 | .26092952+00 | .18741056+01 | .50391833+00 |
| .26354471+00 | .19007078+01 | .26006516+00 | .18823010+01 | .50788376+00 |
| .26441737+00 | .19007149+01 | .25920608+00 | .18906140+01 | .51189718+00 |
| .26529004+00 | .19007247+01 | .25835210+00 | .18990474+01 | .51595973+00 |
| .26616270+00 | .19007373+01 | .25750304+00 | .19076039+01 | .52007250+00 |
| .26703537+00 | .19007526+01 | .25665872+00 | .19162865+01 | .52423663+00 |
| .26790803+00 | .19007706+01 | .25581896+00 | .19250980+01 | .52845333+00 |
| .26878069+00 | .19007911+01 | .25498359+00 | .19340417+01 | .53272380+00 |
| .26965336+00 | .19008143+01 | .25415243+00 | .19431207+01 | .53704935+00 |
| .27052602+00 | .19008400+01 | .25332533+00 | .19523383+01 | .54143129+00 |
| .27139869+00 | .19008683+01 | .25250211+00 | .19616978+01 | .54587094+00 |
| .27227135+00 | .19008991+01 | .25168262+00 | .19712030+01 | .55036975+00 |
| .27314401+00 | .19009323+01 | .25086669+00 | .19808576+01 | .55492917+00 |
| .27401668+00 | .19009680+01 | .25005417+00 | .19906653+01 | .55955074+00 |
| .27488934+00 | .19010062+01 | .24924491+00 | .20006302+01 | .56423603+00 |
| .27576201+00 | .19010468+01 | .24843874+00 | .20107563+01 | .56898664+00 |
| .27663467+00 | .19010898+01 | .24763552+00 | .20210480+01 | .57380428+00 |
| .27750733+00 | .19011353+01 | .24683510+00 | .20315098+01 | .57869074+00 |
| .27838000+00 | .19011831+01 | .24603733+00 | .20421464+01 | .58364784+00 |
| .27925266+00 | .19012333+01 | .24524205+00 | .20529625+01 | .58867747+00 |
| .28012533+00 | .19012859+01 | .24444491+00 | .20639634+01 | .59378166+00 |
| .28099799+00 | .19013408+01 | .24365839+00 | .20751541+01 | .59896240+00 |
| .28187066+00 | .19013981+01 | .24286972+00 | .20865402+01 | .60422187+00 |
| .28274332+00 | .19014577+01 | .24208294+00 | .20981274+01 | .60956231+00 |
| .28361598+00 | .19015197+01 | .24129792+00 | .21099217+01 | .61498605+00 |
| .28448865+00 | .19015840+01 | .24051451+00 | .21219293+01 | .62049551+00 |
| .28536131+00 | .19016507+01 | .23973255+00 | .21341569+01 | .62609325+00 |
| .28623398+00 | .19017197+01 | .23895190+00 | .21466110+01 | .63178191+00 |
| .28710664+00 | .19017911+01 | .23817240+00 | .21592987+01 | .63756421+00 |
| .28797930+00 | .19018649+01 | .23739390+00 | .21722278+01 | .64344312+00 |
| .28885197+00 | .19019410+01 | .23661625+00 | .21854060+01 | .64942169+00 |
| .28972463+00 | .19020195+01 | .23583926+00 | .21988412+01 | .65550298+00 |
| .29059730+00 | .19021004+01 | .23506284+00 | .22125424+01 | .66169041+00 |
| .29146996+00 | .19021837+01 | .23428676+00 | .22265183+01 | .66798745+00 |
| .29234263+00 | .19022694+01 | .23351089+00 | .22407784+01 | .67439769+00 |
| .29321529+00 | .19023576+01 | .23273504+00 | .22553328+01 | .68092503+00 |
| .29365162+00 | .19024026+01 | .23234708+00 | .22627237+01 | .68423392+00 |
| .29408795+00 | .19024482+01 | .23195906+00 | .22701920+01 | .68757357+00 |
| .29452429+00 | .19024945+01 | .23157096+00 | .22777393+01 | .69094460+00 |

TABLE 120. (Concluded)

$$M_{\infty} = .17499992+02$$

$$\Theta_s = .26179938+00$$

| $\underline{\Theta}$ | $\underline{M_1^*}$ | $\underline{\psi_1}$ | $\underline{x}$ | $\underline{r}$ |
|----------------------|---------------------|----------------------|-----------------|-----------------|
| .29496061+00         | .19025416+01        | .23118277+00         | .22853668+01    | .69434743+00    |
| .29539694+00         | .19025892+01        | .23079444+00         | .22930762+01    | .69778275+00    |
| .29583326+00         | .19026375+01        | .23040598+00         | .23008690+01    | .70125112+00    |
| .29626958+00         | .19026864+01        | .23001734+00         | .23087466+01    | .70475313+00    |
| .29670591+00         | .19027360+01        | .22962852+00         | .23167107+01    | .70828936+00    |
| .29714223+00         | .19027863+01        | .22923947+00         | .23247631+01    | .71186054+00    |
| .29757656+00         | .19028371+01        | .22885019+00         | .23329052+01    | .71546723+00    |
| .29801488+00         | .19028887+01        | .22846064+00         | .23411389+01    | .71911009+00    |
| .29845121+00         | .19029408+01        | .22807079+00         | .23494662+01    | .72278992+00    |
| .29888753+00         | .19029937+01        | .22768063+00         | .23578886+01    | .72650732+00    |
| .29932386+00         | .19030471+01        | .22729012+00         | .23664082+01    | .73026305+00    |
| .29976018+00         | .19031013+01        | .22689925+00         | .23750266+01    | .73406778+00    |
| .30019651+00         | .19031562+01        | .22650797+00         | .23837462+01    | .73789238+00    |
| .30063283+00         | .19032117+01        | .22611627+00         | .23925690+01    | .74176761+00    |
| .30106916+00         | .19032679+01        | .22572412+00         | .24014970+01    | .74568427+00    |
| .30150548+00         | .19033248+01        | .22533199+00         | .24105325+01    | .74964321+00    |
| .30194180+00         | .19033825+01        | .22493834+00         | .24196778+01    | .75364529+00    |
| .30237813+00         | .19034407+01        | .22454466+00         | .24289351+01    | .75769137+00    |
| .30281445+00         | .19034998+01        | .22415041+00         | .24383069+01    | .76178245+00    |
| .30325078+00         | .19035596+01        | .22375556+00         | .24477957+01    | .76591940+00    |
| .30368710+00         | .19036200+01        | .22336007+00         | .24574040+01    | .77010322+00    |
| .30412343+00         | .19036812+01        | .22296391+00         | .24671345+01    | .77433493+00    |
| .30455975+00         | .19037432+01        | .22256706+00         | .24769899+01    | .77861554+00    |
| .30499608+00         | .19038059+01        | .22216947+00         | .24869733+01    | .78294623+00    |
| .30543240+00         | .19038693+01        | .22177112+00         | .24970870+01    | .78732791+00    |
| .30586873+00         | .19039336+01        | .22137197+00         | .25073347+01    | .79176192+00    |
| .30630505+00         | .19039986+01        | .22097197+00         | .25177191+01    | .79624934+00    |
| .30674138+00         | .19040644+01        | .22057110+00         | .25282436+01    | .80079144+00    |
| .30717770+00         | .19041310+01        | .22016931+00         | .25389118+01    | .80538955+00    |
| .30761919+00         | .19041837+01        | .21985419+00         | .25497363+01    | .80992813+00    |

$$.21136262+01 = \Delta S/R$$

$$.37991870+02 = P_s/P_{\infty}$$

$$.38072373+01 = \rho_s/\rho_{\infty}$$

$$.99788556+01 = T_s/T_{\infty}$$

TABLE 121. CONICAL FLOWFIELD  $\theta_s = 15.0$  DEG;  $M_\infty = 20.0$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .95172510+00 | .20000019+02 | .26179936+00 | .30627341+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .26179938+00 | .19034145+01 | .26179936+00 | .18660254+01 | .50000000+00 |
| .26267204+00 | .19034160+01 | .26092952+00 | .18742394+01 | .50395431+00 |
| .26354471+00 | .19034203+01 | .26006515+00 | .18825723+01 | .50795696+00 |
| .26441737+00 | .19034274+01 | .25920606+00 | .18910265+01 | .51200688+00 |
| .26529004+00 | .19034373+01 | .25835205+00 | .18996052+01 | .51611127+00 |
| .26616270+00 | .19034499+01 | .25750295+00 | .19083110+01 | .52026527+00 |
| .26703537+00 | .19034652+01 | .25665857+00 | .19171470+01 | .52447205+00 |
| .26790803+00 | .19034832+01 | .25581871+00 | .19261165+01 | .52873290+00 |
| .26878069+00 | .19035038+01 | .25498322+00 | .19352226+01 | .53304907+00 |
| .26965336+00 | .19035270+01 | .25415191+00 | .19444687+01 | .53742193+00 |
| .27052602+00 | .19035528+01 | .25332462+00 | .19538583+01 | .54185284+00 |
| .27139869+00 | .19035811+01 | .25250117+00 | .19633950+01 | .54634321+00 |
| .27227135+00 | .19036119+01 | .25168141+00 | .19730827+01 | .55089457+00 |
| .27314401+00 | .19036452+01 | .25086516+00 | .19829252+01 | .55550640+00 |
| .27401668+00 | .19036810+01 | .25005227+00 | .19929265+01 | .56018633+00 |
| .27488934+00 | .19037193+01 | .24924258+00 | .20030909+01 | .56493003+00 |
| .27576201+00 | .19037600+01 | .24843593+00 | .20134228+01 | .56974119+00 |
| .27663467+00 | .19038031+01 | .24763216+00 | .20239268+01 | .57462161+00 |
| .27750733+00 | .19038486+01 | .24683112+00 | .20346075+01 | .57957314+00 |
| .27838000+00 | .19038966+01 | .24603265+00 | .20454700+01 | .58459775+00 |
| .27925266+00 | .19039469+01 | .24523661+00 | .20565194+01 | .58969739+00 |
| .28012533+00 | .19039996+01 | .24444283+00 | .20677611+01 | .59487423+00 |
| .28099799+00 | .19040547+01 | .24365117+00 | .20792005+01 | .60013035+00 |
| .28187066+00 | .19041121+01 | .24286147+00 | .20908437+01 | .60546808+00 |
| .28274332+00 | .19041719+01 | .24207358+00 | .21026966+01 | .61088979+00 |
| .28361598+00 | .19042341+01 | .24128734+00 | .21147656+01 | .61639792+00 |
| .28448865+00 | .19042987+01 | .24050261+00 | .21270575+01 | .62199509+00 |
| .28536132+00 | .19043656+01 | .23971922+00 | .21395791+01 | .62768398+00 |
| .28623398+00 | .19044349+01 | .23893703+00 | .21523379+01 | .63346744+00 |
| .28710664+00 | .19045065+01 | .23815686+00 | .21653411+01 | .63934832+00 |
| .28797930+00 | .19045806+01 | .23737556+00 | .21785971+01 | .64532980+00 |
| .28885197+00 | .19046570+01 | .23659600+00 | .21921143+01 | .65141514+00 |
| .28972463+00 | .19047359+01 | .23581696+00 | .22059011+01 | .65760762+00 |
| .29059730+00 | .19048171+01 | .23503831+00 | .22199672+01 | .66391090+00 |
| .29146996+00 | .19049008+01 | .23425987+00 | .22343220+01 | .67032667+00 |
| .29234263+00 | .19049870+01 | .23348147+00 | .22489758+01 | .67686483+00 |
| .29321529+00 | .19050757+01 | .23270293+00 | .22639395+01 | .68352355+00 |
| .29365162+00 | .19051209+01 | .23231355+00 | .22715409+01 | .68690020+00 |
| .29408795+00 | .19051670+01 | .23192407+00 | .22792240+01 | .69030908+00 |
| .29452427+00 | .19052137+01 | .23153447+00 | .22869903+01 | .69375080+00 |

TABLE 121. (Concluded)

$$M_{\infty} = .20000019+02$$

$$\Theta_s = .24174938+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .29496040+00 | .19052610+01 | .23114471+00 | .22948414+01 | .69722600+00 |
| .29539622+00 | .19053090+01 | .23075479+00 | .23027791+01 | .70073531+00 |
| .29583324+00 | .19053576+01 | .23036466+00 | .23106049+01 | .70427932+00 |
| .29626957+00 | .19054068+01 | .22997431+00 | .23189203+01 | .70785864+00 |
| .29670589+00 | .19054568+01 | .22958373+00 | .23271272+01 | .71147398+00 |
| .29714222+00 | .19055073+01 | .22919286+00 | .23354275+01 | .71512602+00 |
| .29757854+00 | .19055585+01 | .22880170+00 | .23438228+01 | .71881545+00 |
| .29801487+00 | .19056104+01 | .22841021+00 | .23523151+01 | .72254295+00 |
| .29845119+00 | .19056630+01 | .22801837+00 | .23609065+01 | .72630937+00 |
| .29888752+00 | .19057162+01 | .22762615+00 | .23695987+01 | .73011538+00 |
| .29932384+00 | .19057701+01 | .22723353+00 | .23783942+01 | .73396185+00 |
| .29976017+00 | .19058247+01 | .22684046+00 | .23872946+01 | .73784944+00 |
| .30019649+00 | .19058800+01 | .22644694+00 | .23963026+01 | .74177918+00 |
| .30063282+00 | .19059359+01 | .22605292+00 | .24054201+01 | .74575178+00 |
| .30106914+00 | .19059926+01 | .22565838+00 | .24146497+01 | .74976824+00 |
| .30150547+00 | .19060500+01 | .22526328+00 | .24239936+01 | .75382937+00 |
| .30194179+00 | .19061081+01 | .22486760+00 | .24334544+01 | .75793617+00 |
| .30237811+00 | .19061670+01 | .22447130+00 | .24430347+01 | .76208964+00 |
| .30281444+00 | .19062265+01 | .22407435+00 | .24527372+01 | .76629076+00 |
| .30325076+00 | .19062869+01 | .22367672+00 | .24625644+01 | .77054052+00 |
| .30368709+00 | .19063479+01 | .22327836+00 | .24725195+01 | .77484009+00 |
| .30412341+00 | .19064097+01 | .22287926+00 | .24826050+01 | .77919044+00 |
| .30455974+00 | .19064723+01 | .22247937+00 | .24928244+01 | .78359290+00 |
| .30499606+00 | .19065357+01 | .22207865+00 | .25031806+01 | .78804855+00 |
| .30543239+00 | .19065998+01 | .22167707+00 | .25136767+01 | .79255858+00 |
| .30586871+00 | .19066647+01 | .22127458+00 | .25243163+01 | .79712429+00 |
| .30627341+00 | .19067257+01 | .22090043+00 | .25343161+01 | .80141006+00 |

$$.24491205+01 = \Delta S/R$$

$$.49220171+02 = P_s/P_{\infty}$$

$$.38886335+01 = \rho_s/\rho_{\infty}$$

$$.12657447+02 = T_s/T_{\infty}$$

TABLE 122. CONICAL FLOWFIELD  $\theta_s = 15.0$  DEG;  $M_\infty = 22.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .95265880+00 | .22499773+02 | .26179936+00 | .30541596+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .26179938+00 | .19052819+01 | .26179936+00 | .18660254+01 | .50000000+00 |
| .26267204+00 | .19052833+01 | .26092952+00 | .18743346+01 | .50397993+00 |
| .26354471+00 | .19052877+01 | .26006515+00 | .18827655+01 | .50800908+00 |
| .26441737+00 | .19052948+01 | .25920604+00 | .18913204+01 | .51208846+00 |
| .26529004+00 | .19053047+01 | .25835202+00 | .19000026+01 | .51621924+00 |
| .26616270+00 | .19053173+01 | .25750284+00 | .19088149+01 | .52040264+00 |
| .26703537+00 | .19053326+01 | .25665845+00 | .19177605+01 | .52463986+00 |
| .26790803+00 | .19053506+01 | .25581854+00 | .19268427+01 | .52893224+00 |
| .26878069+00 | .19053712+01 | .25498296+00 | .19360648+01 | .53328105+00 |
| .26965336+00 | .19053944+01 | .25415154+00 | .19454304+01 | .53768772+00 |
| .27052602+00 | .19054202+01 | .25332411+00 | .19549430+01 | .54215366+00 |
| .27139869+00 | .19054486+01 | .25250050+00 | .19646065+01 | .54668032+00 |
| .27227135+00 | .19054794+01 | .25168054+00 | .19744247+01 | .55126926+00 |
| .27314401+00 | .19055128+01 | .25086406+00 | .19844018+01 | .55592208+00 |
| .27401668+00 | .19055487+01 | .25005090+00 | .19945418+01 | .56064039+00 |
| .27488934+00 | .19055870+01 | .24924090+00 | .20048493+01 | .56542595+00 |
| .27576201+00 | .19056277+01 | .24843389+00 | .20153288+01 | .57028053+00 |
| .27663467+00 | .19056709+01 | .24762972+00 | .20259849+01 | .57520594+00 |
| .27750733+00 | .19057166+01 | .24682823+00 | .20368027+01 | .58020415+00 |
| .27838000+00 | .19057646+01 | .24602927+00 | .20476847+01 | .58527721+00 |
| .27925266+00 | .19058150+01 | .24523267+00 | .20586642+01 | .59042712+00 |
| .28012533+00 | .19058678+01 | .24443828+00 | .20704790+01 | .59565614+00 |
| .28099799+00 | .19059230+01 | .24364594+00 | .20820973+01 | .60096645+00 |
| .28187066+00 | .19059805+01 | .24285550+00 | .20939254+01 | .60636648+00 |
| .28274332+00 | .19060405+01 | .24206680+00 | .21059696+01 | .61184068+00 |
| .28361598+00 | .19061028+01 | .24127969+00 | .21182367+01 | .61740963+00 |
| .28448865+00 | .19061675+01 | .24049400+00 | .21307334+01 | .62306999+00 |
| .28536131+00 | .19062346+01 | .23970958+00 | .21434672+01 | .62882462+00 |
| .28623398+00 | .19063041+01 | .23892627+00 | .21564459+01 | .63467648+00 |
| .28710664+00 | .19063769+01 | .23814389+00 | .21696771+01 | .64062658+00 |
| .28797930+00 | .19064502+01 | .23736230+00 | .21831694+01 | .64668418+00 |
| .28885197+00 | .19065249+01 | .23658133+00 | .21969318+01 | .65284672+00 |
| .28972463+00 | .19066060+01 | .23580079+00 | .22109732+01 | .65911968+00 |
| .29059730+00 | .19066875+01 | .23502053+00 | .22253035+01 | .66550681+00 |
| .29146996+00 | .19067715+01 | .23424037+00 | .22399330+01 | .67201202+00 |
| .29234263+00 | .19068580+01 | .23346013+00 | .22548723+01 | .67863946+00 |
| .29321529+00 | .19069470+01 | .23267962+00 | .22701329+01 | .68539347+00 |
| .29408794+00 | .19070386+01 | .23189867+00 | .22778874+01 | .68881932+00 |
| .29496059+00 | .19071329+01 | .23111797+00 | .22857266+01 | .69222850+00 |
| .29583324+00 | .19072307+01 | .23033797+00 | .22936523+01 | .69577166+00 |



TABLE 122. (Concluded)

$$M_{\infty} = .22499473+02$$

$$\Theta_s = .26179938+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .29496059+00 | .19071333+01 | .23111700+00 | .23016661+01 | .69929949+00 |
| .29539691+00 | .19071815+01 | .23072598+00 | .23097699+01 | .70286258+00 |
| .29583324+00 | .19072303+01 | .23033464+00 | .23174651+01 | .70646156+00 |
| .29626956+00 | .19072798+01 | .22994305+00 | .23262538+01 | .71009720+00 |
| .29670589+00 | .19073299+01 | .22955117+00 | .23346376+01 | .71377009+00 |
| .29714221+00 | .19073807+01 | .22915898+00 | .23431185+01 | .71748105+00 |
| .29757854+00 | .19074322+01 | .22876646+00 | .23516983+01 | .72123074+00 |
| .29801486+00 | .19074844+01 | .22837355+00 | .23603794+01 | .72502000+00 |
| .29845119+00 | .19075372+01 | .22798025+00 | .23691636+01 | .72884959+00 |
| .29888751+00 | .19075907+01 | .22758653+00 | .23780531+01 | .73272030+00 |
| .29932383+00 | .19076449+01 | .22719235+00 | .23870500+01 | .73663298+00 |
| .29976016+00 | .19076998+01 | .22679769+00 | .23961568+01 | .74058051+00 |
| .30019648+00 | .19077554+01 | .22640251+00 | .24053758+01 | .74458779+00 |
| .30063281+00 | .19078117+01 | .22600677+00 | .24147092+01 | .74863167+00 |
| .30106913+00 | .19078688+01 | .22561050+00 | .24241597+01 | .75272115+00 |
| .30150546+00 | .19079265+01 | .22521354+00 | .24337299+01 | .75685720+00 |
| .30194178+00 | .19079850+01 | .22481605+00 | .24434222+01 | .76104079+00 |
| .30237811+00 | .19080442+01 | .22441782+00 | .24532396+01 | .76527296+00 |
| .30281443+00 | .19081042+01 | .22401889+00 | .24631848+01 | .76955481+00 |
| .30325076+00 | .19081649+01 | .22361922+00 | .24732608+01 | .77388743+00 |
| .30368708+00 | .19082264+01 | .22321876+00 | .24834708+01 | .77827199+00 |
| .30412341+00 | .19082887+01 | .22281748+00 | .24938178+01 | .78270968+00 |
| .30455973+00 | .19083517+01 | .22241535+00 | .25043052+01 | .78720175+00 |
| .30499605+00 | .19084156+01 | .22201232+00 | .25149362+01 | .79174943+00 |
| .30543237+00 | .19084798+01 | .22160835+00 | .25253063+01 | .79617977+00 |

$$.27565280+01 = \Delta S/R$$

$$.61944818+02 = P_s/P_{\infty}$$

$$.39473420+01 = \rho_s/\rho_{\infty}$$

$$.15692633+02 = T_s/T_{\infty}$$

TABLE 123. CONICAL FLOWFIELD  $\theta_s = 15.0$  DEG;  $M_\infty = 25.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .95332865+00 | .24999949+02 | .26179938+00 | .30480093+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .26179938+00 | .19066216+01 | .26179938+00 | .18660254+01 | .50000000+00 |
| .26267204+00 | .19066230+01 | .26092952+00 | .18744047+01 | .50399877+00 |
| .26354471+00 | .19066273+01 | .26006514+00 | .18829076+01 | .50804743+00 |
| .26441737+00 | .19066344+01 | .25920603+00 | .18915366+01 | .51214699+00 |
| .26529004+00 | .19066443+01 | .25835197+00 | .19002950+01 | .51629869+00 |
| .26616270+00 | .19066570+01 | .25750284+00 | .19091857+01 | .52050374+00 |
| .26703537+00 | .19066723+01 | .25665837+00 | .19182120+01 | .52476338+00 |
| .26790803+00 | .19066903+01 | .25581840+00 | .19273772+01 | .52907698+00 |
| .26878069+00 | .19067110+01 | .25498277+00 | .19366848+01 | .53345183+00 |
| .26965336+00 | .19067342+01 | .25415127+00 | .19461384+01 | .53788342+00 |
| .27052602+00 | .19067600+01 | .25332374+00 | .19557417+01 | .54237516+00 |
| .27139869+00 | .19067884+01 | .25250000+00 | .19654986+01 | .54692855+00 |
| .27227135+00 | .19068193+01 | .25167989+00 | .19754131+01 | .55154522+00 |
| .27314401+00 | .19068527+01 | .25086324+00 | .19854894+01 | .55622676+00 |
| .27401668+00 | .19068886+01 | .25004988+00 | .19957318+01 | .56097486+00 |
| .27488934+00 | .19069269+01 | .24923965+00 | .20061448+01 | .56579132+00 |
| .27576201+00 | .19069677+01 | .24843238+00 | .20167332+01 | .57067793+00 |
| .27663467+00 | .19070110+01 | .24762791+00 | .20275018+01 | .57563660+00 |
| .27750733+00 | .19070566+01 | .24682609+00 | .20384557+01 | .58066933+00 |
| .27838000+00 | .19071047+01 | .24602675+00 | .20496003+01 | .58577820+00 |
| .27925266+00 | .19071552+01 | .24522974+00 | .20609411+01 | .59096530+00 |
| .28012533+00 | .19072081+01 | .24443490+00 | .20724839+01 | .59623294+00 |
| .28099799+00 | .19072633+01 | .24364206+00 | .20842347+01 | .60158337+00 |
| .28187066+00 | .19073210+01 | .24285107+00 | .20961998+01 | .60701910+00 |
| .28274332+00 | .19073810+01 | .24206177+00 | .21083857+01 | .61254263+00 |
| .28361598+00 | .19074434+01 | .24127400+00 | .21207995+01 | .61815663+00 |
| .28448865+00 | .19075083+01 | .24048760+00 | .21334482+01 | .62386386+00 |
| .28536131+00 | .19075755+01 | .23970240+00 | .21463395+01 | .62966724+00 |
| .28623398+00 | .19076451+01 | .23891826+00 | .21594813+01 | .63556985+00 |
| .28710664+00 | .19077171+01 | .23813498+00 | .21728816+01 | .64157475+00 |
| .28797930+00 | .19077915+01 | .23735243+00 | .21865495+01 | .64768540+00 |
| .28885197+00 | .19078683+01 | .23657041+00 | .22004941+01 | .65390531+00 |
| .28972463+00 | .19079477+01 | .23578876+00 | .22147247+01 | .66023806+00 |
| .29059730+00 | .19080294+01 | .23500730+00 | .22292517+01 | .66668756+00 |
| .29146996+00 | .19081136+01 | .23422585+00 | .22440856+01 | .67325789+00 |
| .29234263+00 | .19082003+01 | .23344424+00 | .22592376+01 | .67995328+00 |
| .29321528+00 | .19082898+01 | .23266227+00 | .22747196+01 | .68677825+00 |
| .29365161+00 | .19083365+01 | .23227109+00 | .22825882+01 | .69024079+00 |
| .29408793+00 | .19083819+01 | .23187975+00 | .22905440+01 | .69373754+00 |
| .29452426+00 | .19084290+01 | .23148822+00 | .22985887+01 | .69726912+00 |

TABLE 123. (Concluded)

$$M_{\infty} = .2494949+02$$

$$\Theta_s = .26179938+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .29496058+00 | .19084766+01 | .23109648+00 | .23067240+01 | .70083618+00 |
| .29539691+00 | .19085250+01 | .23070450+00 | .23149517+01 | .70443441+00 |
| .29583323+00 | .19085740+01 | .23031227+00 | .23232736+01 | .70807946+00 |
| .29626955+00 | .19086237+01 | .22991974+00 | .23316917+01 | .71175711+00 |
| .29670588+00 | .19086740+01 | .22952690+00 | .23402076+01 | .71547302+00 |
| .29714220+00 | .19087250+01 | .22913371+00 | .23488237+01 | .71922801+00 |
| .29757853+00 | .19087766+01 | .22874015+00 | .23575419+01 | .72302285+00 |
| .29801485+00 | .19088290+01 | .22834619+00 | .23663641+01 | .72685826+00 |
| .29845118+00 | .19088820+01 | .22795179+00 | .23752927+01 | .73073512+00 |
| .29888750+00 | .19089357+01 | .22755694+00 | .23843299+01 | .73465427+00 |
| .29932383+00 | .19089901+01 | .22716160+00 | .23934780+01 | .73861659+00 |
| .29976015+00 | .19090453+01 | .22676574+00 | .24027393+01 | .74262299+00 |
| .30019648+00 | .19091011+01 | .22636933+00 | .24121163+01 | .74667429+00 |
| .30063280+00 | .19091577+01 | .22597234+00 | .24216116+01 | .75077159+00 |
| .30106913+00 | .19092150+01 | .22557472+00 | .24312280+01 | .75491589+00 |
| .30150545+00 | .19092730+01 | .22517646+00 | .24409679+01 | .75910610+00 |
| .30194177+00 | .19093318+01 | .22477752+00 | .24508342+01 | .76334434+00 |
| .30237810+00 | .19093912+01 | .22437785+00 | .24608298+01 | .76764066+00 |
| .30281442+00 | .19094515+01 | .22397743+00 | .24709577+01 | .77198320+00 |
| .30325075+00 | .19095126+01 | .22357622+00 | .24812210+01 | .77637815+00 |
| .30368707+00 | .19095744+01 | .22317418+00 | .24916231+01 | .78082675+00 |
| .30412340+00 | .19096370+01 | .22277127+00 | .25021670+01 | .78533013+00 |
| .30455972+00 | .19097003+01 | .22236745+00 | .25128563+01 | .78988968+00 |
| .30499603+00 | .19097637+01 | .22196381+00 | .25188292+01 | .79443484+00 |

$$.30390684+01 = \Delta S/R$$

$$.76166305+02 = P_s/P_{\infty}$$

$$.39909755+01 = \rho_s/\rho_{\infty}$$

$$.19084634+02 = T_s/T_{\infty}$$

TABLE 124. CONICAL FLOWFIELD  $\theta_s = 15.0$  DEG;  $M_\infty = 27.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .95382532+00 | .27500026+02 | .26179938+00 | .30434491+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .26179938+00 | .19076149+01 | .26179938+00 | .18660254+01 | .50000000+00 |
| .26267204+00 | .19076163+01 | .26092952+00 | .18744576+01 | .50401299+00 |
| .26354471+00 | .19076206+01 | .26006511+00 | .18830149+01 | .50807638+00 |
| .26441737+00 | .19076278+01 | .25920602+00 | .18916999+01 | .51219119+00 |
| .26529004+00 | .19076377+01 | .25835197+00 | .19005158+01 | .51635870+00 |
| .26616270+00 | .19076503+01 | .25750280+00 | .19094658+01 | .52058010+00 |
| .26703537+00 | .19076657+01 | .25665830+00 | .19185531+01 | .52485669+00 |
| .26790803+00 | .19076837+01 | .25581831+00 | .19277810+01 | .52918983+00 |
| .26878069+00 | .19077044+01 | .25498262+00 | .19371533+01 | .53358080+00 |
| .26965336+00 | .19077276+01 | .25415106+00 | .19466734+01 | .53803129+00 |
| .27052602+00 | .19077535+01 | .25332345+00 | .19563454+01 | .54264256+00 |
| .27139869+00 | .19077818+01 | .25249962+00 | .19661730+01 | .54741621+00 |
| .27227135+00 | .19078127+01 | .25167940+00 | .19761603+01 | .55235385+00 |
| .27314401+00 | .19078462+01 | .25086262+00 | .19863118+01 | .55745715+00 |
| .27401668+00 | .19078821+01 | .25004911+00 | .19966317+01 | .56272782+00 |
| .27488934+00 | .19079204+01 | .24923870+00 | .20071248+01 | .56806770+00 |
| .27576201+00 | .19079613+01 | .24843123+00 | .20177957+01 | .57349785+00 |
| .27663467+00 | .19080046+01 | .24762654+00 | .20286494+01 | .57902444+00 |
| .27750733+00 | .19080503+01 | .24682447+00 | .20396914+01 | .58465213+00 |
| .27838000+00 | .19080984+01 | .24602484+00 | .20509270+01 | .59038537+00 |
| .27925266+00 | .19081489+01 | .24522752+00 | .20623617+01 | .59622955+00 |
| .28012533+00 | .19082018+01 | .24443232+00 | .20740017+01 | .60219059+00 |
| .28099799+00 | .19082572+01 | .24363910+00 | .20858529+01 | .60827504+00 |
| .28187066+00 | .19083149+01 | .24284770+00 | .20979220+01 | .61448922+00 |
| .28274332+00 | .19083750+01 | .24205794+00 | .21102155+01 | .62083843+00 |
| .28361598+00 | .19084375+01 | .24126967+00 | .21227407+01 | .62732804+00 |
| .28448865+00 | .19085024+01 | .24048273+00 | .21355049+01 | .63396354+00 |
| .28536131+00 | .19085697+01 | .23969694+00 | .21485159+01 | .64075052+00 |
| .28623398+00 | .19086394+01 | .23891216+00 | .21617817+01 | .64769451+00 |
| .28710664+00 | .19087115+01 | .23812820+00 | .21753108+01 | .65479999+00 |
| .28797930+00 | .19087861+01 | .23734490+00 | .21891123+01 | .66207244+00 |
| .28885197+00 | .19088630+01 | .23656209+00 | .22031956+01 | .66951740+00 |
| .28972463+00 | .19089425+01 | .23577958+00 | .22175704+01 | .67714137+00 |
| .29059730+00 | .19090244+01 | .23499721+00 | .22322472+01 | .68494994+00 |
| .29146996+00 | .19091088+01 | .23421478+00 | .22472370+01 | .69294964+00 |
| .29234263+00 | .19091957+01 | .23343212+00 | .22625512+01 | .70114699+00 |
| .29321527+00 | .19092855+01 | .23264903+00 | .22782020+01 | .70954854+00 |
| .29408792+00 | .19093778+01 | .23225727+00 | .22941576+01 | .71816084+00 |
| .29496057+00 | .19094725+01 | .23186532+00 | .23104203+01 | .72699044+00 |
| .29583322+00 | .19095696+01 | .23147316+00 | .23270377+01 | .73604484+00 |

TABLE 124. (Concluded)

$$M_{\infty} = .27500026+02$$

$$\Theta_s = .26179938+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .29496057+00 | .19094720+01 | .23108077+00 | .23105657+01 | .70200332+00 |
| .29539690+00 | .19095212+01 | .23068813+00 | .23188883+01 | .70563728+00 |
| .29583322+00 | .19095704+01 | .23029520+00 | .23273070+01 | .70930871+00 |
| .29626455+00 | .19096202+01 | .22990195+00 | .23358240+01 | .71301849+00 |
| .29670587+00 | .19096706+01 | .22950837+00 | .23444411+01 | .71676729+00 |
| .29714220+00 | .19097217+01 | .22911442+00 | .23531605+01 | .72055595+00 |
| .29757852+00 | .19097736+01 | .22872008+00 | .23619843+01 | .72438525+00 |
| .29801485+00 | .19098260+01 | .22832530+00 | .23709146+01 | .72825599+00 |
| .29845117+00 | .19098792+01 | .22793007+00 | .23799538+01 | .73216904+00 |
| .29888749+00 | .19099331+01 | .22753436+00 | .23891041+01 | .73612526+00 |
| .29932382+00 | .19099877+01 | .22713812+00 | .23983678+01 | .74012556+00 |
| .29976014+00 | .19100430+01 | .22674135+00 | .24077477+01 | .74417090+00 |
| .30019647+00 | .19100991+01 | .22634399+00 | .24172460+01 | .74826219+00 |
| .30063279+00 | .19101558+01 | .22594602+00 | .24268656+01 | .75240048+00 |
| .30106912+00 | .19102133+01 | .22554739+00 | .24366089+01 | .75658669+00 |
| .30150544+00 | .19102715+01 | .22514809+00 | .24464789+01 | .76082195+00 |
| .30194177+00 | .19103305+01 | .22474806+00 | .24564786+01 | .76510736+00 |
| .30237809+00 | .19103902+01 | .22434729+00 | .24666111+01 | .76944409+00 |
| .30281442+00 | .19104507+01 | .22394573+00 | .24768792+01 | .77383320+00 |
| .30325074+00 | .19105120+01 | .22354333+00 | .24872863+01 | .77827597+00 |
| .30368707+00 | .19105740+01 | .22314008+00 | .24978357+01 | .78277364+00 |
| .30412339+00 | .19106369+01 | .22273591+00 | .25085308+01 | .78732745+00 |
| .30455971+00 | .19106991+01 | .22233035+00 | .25194017+01 | .78966141+00 |

$$.32998131+01 = \Delta S/R$$

$$.91885391+02 = P_s/P_{\infty}$$

$$.40241197+01 = \rho_s/\rho_{\infty}$$

$$.22633663+02 = T_s/T_{\infty}$$



TABLE 125. CONICAL FLOWFIELD  $\theta_s = 15.0$  DEG;  $M_\infty = 30.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .95420364+00 | .30000019+02 | .26179936+00 | .30399757+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .26179936+00 | .19083715+01 | .26179936+00 | .13660254+01 | .50000000+00 |
| .26267204+00 | .19083729+01 | .26092952+00 | .18744984+01 | .50402397+00 |
| .26354471+00 | .19083772+01 | .26006514+00 | .18630977+01 | .50809873+00 |
| .26441737+00 | .19083844+01 | .25920602+00 | .18918259+01 | .51222531+00 |
| .26529004+00 | .19083943+01 | .25835196+00 | .19006863+01 | .51640502+00 |
| .26616270+00 | .19084070+01 | .25750277+00 | .19090820+01 | .52063905+00 |
| .26703537+00 | .19084223+01 | .25665826+00 | .19180164+01 | .52492873+00 |
| .26790803+00 | .19084404+01 | .25581823+00 | .19280929+01 | .52927544+00 |
| .26878069+00 | .19084610+01 | .25498250+00 | .19375151+01 | .53363054+00 |
| .26965336+00 | .19084843+01 | .25415089+00 | .19470868+01 | .53814553+00 |
| .27052602+00 | .19085101+01 | .25332323+00 | .19568118+01 | .54267190+00 |
| .27139869+00 | .19085385+01 | .25249933+00 | .19666940+01 | .54726119+00 |
| .27227136+00 | .19085695+01 | .25167902+00 | .19767378+01 | .55191507+00 |
| .27314401+00 | .19086029+01 | .25086214+00 | .19869474+01 | .55663520+00 |
| .27401668+00 | .19086388+01 | .25004850+00 | .19973273+01 | .56142333+00 |
| .27488934+00 | .19086773+01 | .24923796+00 | .20078822+01 | .56628131+00 |
| .27576201+00 | .19087181+01 | .24843037+00 | .20186171+01 | .57121103+00 |
| .27663467+00 | .19087614+01 | .24762547+00 | .20295369+01 | .57621440+00 |
| .27750733+00 | .19088072+01 | .24682320+00 | .20406471+01 | .58129357+00 |
| .27838000+00 | .19088553+01 | .24602330+00 | .20519531+01 | .58645062+00 |
| .27925266+00 | .19089059+01 | .24522577+00 | .20634606+01 | .59168777+00 |
| .28012533+00 | .19089589+01 | .24443033+00 | .20751759+01 | .59700741+00 |
| .28099799+00 | .19090142+01 | .24363681+00 | .20871050+01 | .60241187+00 |
| .28187066+00 | .19090720+01 | .24284507+00 | .20992547+01 | .60790376+00 |
| .28274332+00 | .19091322+01 | .24205496+00 | .21116318+01 | .61348570+00 |
| .28361598+00 | .19091947+01 | .24126630+00 | .21242435+01 | .61916045+00 |
| .28448865+00 | .19092597+01 | .24047894+00 | .21370973+01 | .62493093+00 |
| .28536131+00 | .19093271+01 | .23969270+00 | .21502011+01 | .63080013+00 |
| .28623398+00 | .19093969+01 | .23890742+00 | .21635633+01 | .63677125+00 |
| .28710664+00 | .19094691+01 | .23812293+00 | .21771924+01 | .64284758+00 |
| .28797930+00 | .19095437+01 | .23733905+00 | .21910977+01 | .64903264+00 |
| .28885197+00 | .19096208+01 | .23655562+00 | .22052888+01 | .65533011+00 |
| .28972463+00 | .19097003+01 | .23577245+00 | .22197756+01 | .66174379+00 |
| .29059730+00 | .19097823+01 | .23498936+00 | .22345690+01 | .66827777+00 |
| .29146996+00 | .19098669+01 | .23420617+00 | .22496800+01 | .67493427+00 |
| .29234262+00 | .19099541+01 | .23342270+00 | .22651203+01 | .68172375+00 |
| .29321527+00 | .19100440+01 | .23263874+00 | .22809926+01 | .68864496+00 |
| .29408792+00 | .19100900+01 | .23224651+00 | .22889280+01 | .69215726+00 |
| .29496057+00 | .19101366+01 | .23185408+00 | .22970400+01 | .69570493+00 |
| .29583322+00 | .19101838+01 | .23146144+00 | .23052462+01 | .69928861+00 |

TABLE 125. (Concluded)

$$M_{\infty} = +30000019+02$$

$$\Theta_s = +26179938+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| +29496057+00 | +19102317+01 | +23106654+00 | +23135464+01 | +70290693+00 |
| +29539689+00 | +19102802+01 | +23067530+00 | +23219428+01 | +70656674+00 |
| +29583322+00 | +19103244+01 | +23028190+00 | +23304368+01 | +71026259+00 |
| +29626954+00 | +19103743+01 | +22988410+00 | +23390307+01 | +71399740+00 |
| +29670586+00 | +19104299+01 | +22949395+00 | +23477269+01 | +71777187+00 |
| +29714219+00 | +19104811+01 | +22909940+00 | +23565269+01 | +72158676+00 |
| +29757851+00 | +19105331+01 | +22870445+00 | +23654331+01 | +72544292+00 |
| +29801484+00 | +19105857+01 | +22830904+00 | +23744477+01 | +72934120+00 |
| +29845116+00 | +19106390+01 | +22791316+00 | +23835732+01 | +73328249+00 |
| +29888749+00 | +19106930+01 | +22751677+00 | +23928116+01 | +73726759+00 |
| +29932381+00 | +19107477+01 | +22711984+00 | +24021657+01 | +74129754+00 |
| +29976014+00 | +19108031+01 | +22672235+00 | +24116380+01 | +74537327+00 |
| +30019646+00 | +19108593+01 | +22632422+00 | +24212307+01 | +74949571+00 |
| +30063279+00 | +19109162+01 | +22592549+00 | +24309476+01 | +75366801+00 |
| +30106911+00 | +19109738+01 | +22552608+00 | +24407902+01 | +75788500+00 |
| +30150544+00 | +19110322+01 | +22512595+00 | +24507622+01 | +76215397+00 |
| +30194176+00 | +19110913+01 | +22472509+00 | +24608662+01 | +76647392+00 |
| +30237808+00 | +19111512+01 | +22432345+00 | +24711055+01 | +77084608+00 |
| +30281441+00 | +19112119+01 | +22392079+00 | +24814834+01 | +77527165+00 |
| +30325073+00 | +19112734+01 | +22351768+00 | +24920030+01 | +77975182+00 |
| +30368706+00 | +19113356+01 | +22311347+00 | +25026678+01 | +78428791+00 |
| +30399757+00 | +19113804+01 | +22282524+00 | +25103478+01 | +78875500+00 |

$$+35414623+01 = \Delta S/R$$

$$+10910099+03 = P_s/P_{\infty}$$

$$+40498531+01 = \rho_s/\rho_{\infty}$$

$$+26939492+02 = T_s/T_{\infty}$$

TABLE 126. CONICAL FLOWFIELD  $\theta_s = 17.5 \text{ DEG}$ ;  $M_\infty = 1.3145811$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .50000938+00 | .13145811+01 | .30543261+00 | .97946664+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .30543261+00 | .10000000+01 | .30543261+00 | .15857974+01 | .50000000+00 |
| .32637655+00 | .10003947+01 | .28578795+00 | .15762004+01 | .53351435+00 |
| .34732049+00 | .10014312+01 | .26842029+00 | .15682146+01 | .56768568+00 |
| .36826443+00 | .10029407+01 | .25293216+00 | .15616735+01 | .60259956+00 |
| .38920837+00 | .10048045+01 | .23901385+00 | .15564568+01 | .63834934+00 |
| .41015231+00 | .10069376+01 | .22642003+00 | .15524775+01 | .67503632+00 |
| .43109625+00 | .10092786+01 | .21495362+00 | .15496750+01 | .71277073+00 |
| .44985853+00 | .10115151+01 | .20550695+00 | .15481327+01 | .74756322+00 |
| .46862081+00 | .10138580+01 | .19674048+00 | .15474907+01 | .78338939+00 |
| .48738309+00 | .10162894+01 | .18857832+00 | .15477459+01 | .82035391+00 |
| .50614531+00 | .10187953+01 | .18093629+00 | .15489080+01 | .85857335+00 |
| .52490743+00 | .10213656+01 | .17377012+00 | .15509960+01 | .89817627+00 |
| .54366955+00 | .10239928+01 | .16702361+00 | .15540403+01 | .93930659+00 |
| .56025003+00 | .10263578+01 | .16137508+00 | .15575601+01 | .97705416+00 |
| .57683051+00 | .10287607+01 | .15592212+00 | .15618966+01 | .10162446+01 |
| .59341098+00 | .10312001+01 | .15085044+00 | .15670959+01 | .10570173+01 |
| .60999146+00 | .10336756+01 | .14592816+00 | .15732132+01 | .10995284+01 |
| .62657194+00 | .10361872+01 | .14120553+00 | .15803148+01 | .11439540+01 |
| .64315242+00 | .10387359+01 | .13666455+00 | .15884794+01 | .11904943+01 |
| .65755125+00 | .10409805+01 | .13285573+00 | .15965040+01 | .12328022+01 |
| .67195009+00 | .10432555+01 | .12916148+00 | .16054721+01 | .12770458+01 |
| .68634892+00 | .10455629+01 | .12557245+00 | .16154669+01 | .13234170+01 |
| .70074776+00 | .10479047+01 | .12207987+00 | .16265852+01 | .13721343+01 |
| .71514659+00 | .10502835+01 | .11867534+00 | .16389395+01 | .14234474+01 |
| .72954543+00 | .10527025+01 | .11535092+00 | .16526626+01 | .14776444+01 |
| .74176262+00 | .10547890+01 | .11258721+00 | .16654949+01 | .15261378+01 |
| .75397982+00 | .10569094+01 | .10987096+00 | .16795348+01 | .15771805+01 |
| .76619701+00 | .10590665+01 | .10719760+00 | .16949111+01 | .16310411+01 |
| .77841420+00 | .10612635+01 | .10456258+00 | .17117732+01 | .16880294+01 |
| .79063140+00 | .10635042+01 | .10196127+00 | .17302992+01 | .17485047+01 |
| .80284857+00 | .10657925+01 | .99388987+00 | .17506947+01 | .18128870+01 |
| .81288414+00 | .10677113+01 | .97294353+00 | .17690196+01 | .18690405+01 |
| .82291970+00 | .10696686+01 | .95213175+00 | .17889338+01 | .19284824+01 |
| .83295525+00 | .10716677+01 | .93142495+00 | .18106268+01 | .19915843+01 |
| .84299080+00 | .10737127+01 | .91079116+00 | .18343180+01 | .20587800+01 |
| .85302635+00 | .10758080+01 | .89019626+00 | .18602738+01 | .21305802+01 |
| .86306190+00 | .10779587+01 | .86960256+00 | .18888087+01 | .22075917+01 |
| .87091582+00 | .10796845+01 | .85345976+00 | .19131834+01 | .22719623+01 |
| .87876973+00 | .10814513+01 | .83726965+00 | .19395879+01 | .23403807+01 |
| .88662364+00 | .10832628+01 | .82100786+00 | .19682790+01 | .24133307+01 |

TABLE 126. (Concluded)

$$M_{\infty} = .13145811+01$$

$$\Theta_s = .30543261+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .89447755+00 | .10851235+01 | .80464616-01 | .19995622+01 | .24913839+01 |
| .90233146+00 | .10870385+01 | .78815363-01 | .20338040+01 | .25752226+01 |
| .91018537+00 | .10890139+01 | .77149324-01 | .20714495+01 | .26656688+01 |
| .91585764+00 | .10904819+01 | .75933240-01 | .21010577+01 | .27356573+01 |
| .92152990+00 | .10919882+01 | .74704401-01 | .21329704+01 | .28100618+01 |
| .92720217+00 | .10935362+01 | .73460639-01 | .21674795+01 | .28894126+01 |
| .93287444+00 | .10951302+01 | .72199553-01 | .22049321+01 | .29743376+01 |
| .93854642+00 | .10967751+01 | .70918381-01 | .22457437+01 | .30655839+01 |
| .94421743+00 | .10984763+01 | .69613859-01 | .22904171+01 | .31640491+01 |
| .94770728+00 | .10995542+01 | .68797737-01 | .23200965+01 | .32287116+01 |
| .95119713+00 | .11006581+01 | .67970186-01 | .23516494+01 | .32968398+01 |
| .95468698+00 | .11017898+01 | .67129970-01 | .23852756+01 | .33687875+01 |
| .95817684+00 | .11029519+01 | .66275701-01 | .24212090+01 | .34449666+01 |
| .96166669+00 | .11041471+01 | .65405816-01 | .24597229+01 | .35258570+01 |
| .96515654+00 | .11053786+01 | .64518467-01 | .25011405+01 | .36120243+01 |
| .96864639+00 | .11066502+01 | .63611493-01 | .25458478+01 | .37041415+01 |
| .97213624+00 | .11079663+01 | .62682405-01 | .25943094+01 | .38030162+01 |
| .97562610+00 | .11093320+01 | .61728135-01 | .26470945+01 | .39096332+01 |
| .97911595+00 | .11107538+01 | .60745016-01 | .27049069+01 | .40252064+01 |
| .97946664+00 | .11109001+01 | .60644470-01 | .27110270+01 | .40373715+01 |

$$.78437477-03 = \Delta S/R$$

$$.15178615+01 = P_s/P_{\infty}$$

$$.12841059+01 = \rho_s/\rho_{\infty}$$

$$.11820376+01 = T_s/T_{\infty}$$

TABLE 127. CONICAL FLOWFIELD  $\theta_s = 17.5 \text{ DEG}$ ;  $M_\infty = 1.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .55854790+00 | .14999967+01 | .30543261+00 | .83069723+00 |              |
| $\theta$     | $M^*_1$      | $\psi_1$     | $\chi$       | $\tau$       |
| .30543261+00 | .11170748+01 | .30543261+00 | .15857974+01 | .50000000+00 |
| .32114056+00 | .11173295+01 | .29046611+00 | .15932321+01 | .52999774+00 |
| .33684852+00 | .11180193+01 | .27683492+00 | .16013668+01 | .56079061+00 |
| .35255647+00 | .11190550+01 | .26434948+00 | .16102383+01 | .59245228+00 |
| .36826443+00 | .11203689+01 | .25285476+00 | .16192884+01 | .62506282+00 |
| .38397238+00 | .11219093+01 | .24222247+00 | .16303633+01 | .65870942+00 |
| .39837134+00 | .11234860+01 | .23314187+00 | .16407349+01 | .69054390+00 |
| .41277030+00 | .11251953+01 | .22462549+00 | .16518898+01 | .72341013+00 |
| .42716926+00 | .11270179+01 | .21661270+00 | .16638797+01 | .75737688+00 |
| .44156822+00 | .11289387+01 | .20905116+00 | .16767624+01 | .79260179+00 |
| .45596718+00 | .11309455+01 | .20189496+00 | .16906040+01 | .82913303+00 |
| .46905714+00 | .11328365+01 | .19570702+00 | .17040819+01 | .86359517+00 |
| .48214710+00 | .11347851+01 | .18979382+00 | .17184766+01 | .89935259+00 |
| .49523706+00 | .11367868+01 | .18413118+00 | .17338592+01 | .93651641+00 |
| .50832696+00 | .11388382+01 | .17869719+00 | .17503099+01 | .97521008+00 |
| .52141681+00 | .11409369+01 | .17347212+00 | .17679195+01 | .10155718+01 |
| .53319767+00 | .11428647+01 | .16893329+00 | .17848436+01 | .10534513+01 |
| .54497854+00 | .11448288+01 | .16453698+00 | .18028747+01 | .10929339+01 |
| .55675940+00 | .11468290+01 | .16027186+00 | .18221088+01 | .11341612+01 |
| .56854027+00 | .11488653+01 | .15612755+00 | .18426542+01 | .11772920+01 |
| .58032113+00 | .11509384+01 | .15209406+00 | .18646345+01 | .12225057+01 |
| .59079301+00 | .11528129+01 | .14859421+00 | .18854909+01 | .12646078+01 |
| .60126489+00 | .11547182+01 | .14516833+00 | .19077054+01 | .13086770+01 |
| .61173677+00 | .11566556+01 | .14181036+00 | .19314056+01 | .13548949+01 |
| .62220865+00 | .11586267+01 | .13851439+00 | .19567373+01 | .14034671+01 |
| .63268054+00 | .11606333+01 | .13527475+00 | .19838675+01 | .14546278+01 |
| .64184343+00 | .11624197+01 | .13248181+00 | .20092320+01 | .15017263+01 |
| .65100633+00 | .11642371+01 | .12972387+00 | .20362674+01 | .15512152+01 |
| .66016922+00 | .11660869+01 | .12699717+00 | .20651426+01 | .16033273+01 |
| .66933212+00 | .11679715+01 | .12429783+00 | .20960508+01 | .16583276+01 |
| .67849501+00 | .11698934+01 | .12162194+00 | .21292156+01 | .17165209+01 |
| .68634892+00 | .11715727+01 | .11934388+00 | .21596341+01 | .17692077+01 |
| .69420283+00 | .11732837+01 | .11707741+00 | .21920892+01 | .18247531+01 |
| .70205674+00 | .11750288+01 | .11481970+00 | .22267977+01 | .18834486+01 |
| .70991065+00 | .11768107+01 | .11256780+00 | .22640163+01 | .19456301+01 |
| .71776456+00 | .11786323+01 | .11031850+00 | .23040199+01 | .20116872+01 |
| .72430949+00 | .11801833+01 | .10844360+00 | .23397425+01 | .20700203+01 |
| .73085441+00 | .11817667+01 | .10656594+00 | .23778748+01 | .21316634+01 |
| .73739934+00 | .11833850+01 | .10468319+00 | .24186831+01 | .21969670+01 |
| .74394426+00 | .11850412+01 | .10279270+00 | .24624781+01 | .22663379+01 |



TABLE 127. (Concluded)

$$M_{\infty} = .14999967+01$$

$$\Theta_s = .30543261+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .75048919+00 | .11867387+01 | .10089166+00 | .25096236+01 | .23402506+01 |
| .75572513+00 | .11881290+01 | .99361010-01 | .25500386+01 | .24030231+01 |
| .76096107+00 | .11995504+01 | .97819716-01 | .25931287+01 | .24693908+01 |
| .76619701+00 | .11910055+01 | .96265666-01 | .26391922+01 | .25397385+01 |
| .77143295+00 | .11924973+01 | .94696574-01 | .26885767+01 | .26145130+01 |
| .77666889+00 | .11940289+01 | .93109831-01 | .27416909+01 | .26942380+01 |
| .78059497+00 | .11952062+01 | .91906473-01 | .27842524+01 | .27576335+01 |
| .78452106+00 | .11964100+01 | .90690084-01 | .28294203+01 | .28244613+01 |
| .78844714+00 | .11976424+01 | .89459062-01 | .28774688+01 | .28950692+01 |
| .79237323+00 | .11989056+01 | .88211596-01 | .29287158+01 | .29698594+01 |
| .79629931+00 | .12002025+01 | .86946660-01 | .29835316+01 | .30492989+01 |
| .79991670+00 | .12010874+01 | .86090289-01 | .30222704+01 | .31051086+01 |
| .80153409+00 | .12019895+01 | .85224874-01 | .30629360+01 | .31634126+01 |
| .80415148+00 | .12029102+01 | .84348589-01 | .31056960+01 | .32244205+01 |
| .80676886+00 | .12038507+01 | .83460413-01 | .31497390+01 | .32883681+01 |
| .80938625+00 | .12048124+01 | .82559310-01 | .31958279+01 | .33555228+01 |
| .81200364+00 | .12057969+01 | .81644043-01 | .32448563+01 | .34261908+01 |
| .81462103+00 | .12068062+01 | .80713265-01 | .33018733+01 | .35007212+01 |
| .81723842+00 | .12078421+01 | .79765432-01 | .33588535+01 | .35795191+01 |
| .81985581+00 | .12089072+01 | .78798763-01 | .34169297+01 | .36630549+01 |
| .82247320+00 | .12100042+01 | .77811204-01 | .34835052+01 | .37518804+01 |
| .82509059+00 | .12111363+01 | .76800406-01 | .35527929+01 | .38466491+01 |
| .82770798+00 | .12123071+01 | .75763509-01 | .36274294+01 | .39481418+01 |
| .83032537+00 | .12135213+01 | .74697189-01 | .37081884+01 | .40573052+01 |
| .83069723+00 | .12136976+01 | .74543066-01 | .37202115+01 | .40735011+01 |

$$.12397480+02 = \Delta S/R$$

$$.15888432+01 = P_s/P_{\infty}$$

$$.13195650+01 = \rho_s/\rho_{\infty}$$

$$.12040659+01 = T_s/T_{\infty}$$

TABLE 128. CONICAL FLOWFIELD  $\theta_s = 17.5 \text{ DEG}$ ;  $M_\infty = 2.0$

| $\underline{u}_s$    | $\underline{M}_\infty$ | $\underline{\theta}_s$ | $\underline{\theta}_w$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .66856004+00         | .19999953+01           | .30543261+00           | .63603823+00           |                 |
| $\underline{\theta}$ | $\underline{M}_1^*$    | $\underline{\psi}_1$   | $\underline{x}$        | $\underline{r}$ |
| .30543261+00         | .13370950+01           | .30543261+00           | .15857974+01           | .50000000+00    |
| .31546825+00         | .13372230+01           | .29570413+00           | .16001418+01           | .52223427+00    |
| .32550369+00         | .13375824+01           | .28654467+00           | .16152511+01           | .54516167+00    |
| .33553952+00         | .13381415+01           | .27789358+00           | .16311720+01           | .56883230+00    |
| .34557516+00         | .13388746+01           | .26969850+00           | .16479569+01           | .59330092+00    |
| .35561080+00         | .13397605+01           | .26191389+00           | .16656641+01           | .61862767+00    |
| .36477377+00         | .13406878+01           | .25513075+00           | .16826919+01           | .64255749+00    |
| .37393675+00         | .13417168+01           | .24862954+00           | .17005978+01           | .66731302+00    |
| .38309972+00         | .13428380+01           | .24238609+00           | .17194423+01           | .69295485+00    |
| .39226269+00         | .13440437+01           | .23637860+00           | .17392931+01           | .71954972+00    |
| .40142567+00         | .13453273+01           | .23058732+00           | .17602258+01           | .74717139+00    |
| .40971598+00         | .13466512+01           | .22551884+00           | .17801669+01           | .77311503+00    |
| .41800629+00         | .13478311+01           | .22060035+00           | .18011314+01           | .80063256+00    |
| .42629660+00         | .13491642+01           | .21582047+00           | .18231962+01           | .82799774+00    |
| .43458690+00         | .13505484+01           | .21116854+00           | .18464475+01           | .85709223+00    |
| .44287721+00         | .13519818+01           | .20663461+00           | .18709804+01           | .88740641+00    |
| .45029486+00         | .13533051+01           | .20267032+00           | .18941061+01           | .91564597+00    |
| .45771251+00         | .13546662+01           | .19878665+00           | .19184275+01           | .94502312+00    |
| .46513015+00         | .13560645+01           | .19497744+00           | .19440436+01           | .97562709+00    |
| .47254780+00         | .13575009+01           | .19123678+00           | .19710601+01           | .10075572+01    |
| .47996544+00         | .13589746+01           | .18755901+00           | .19995973+01           | .10409242+01    |
| .48651042+00         | .13603065+01           | .18436166+00           | .20261474+01           | .10716579+01    |
| .49305540+00         | .13616685+01           | .18120513+00           | .20540909+01           | .11037025+01    |
| .49960038+00         | .13630613+01           | .17808567+00           | .20835445+01           | .11371647+01    |
| .50614531+00         | .13644858+01           | .17499952+00           | .21146387+01           | .11721629+01    |
| .51269024+00         | .13659430+01           | .17194293+00           | .21475220+01           | .12088315+01    |
| .51836251+00         | .13672333+01           | .16931492+00           | .21775966+01           | .12420783+01    |
| .52403478+00         | .13685502+01           | .16670370+00           | .22092633+01           | .12768034+01    |
| .52970704+00         | .13698947+01           | .16410668+00           | .22426597+01           | .13131300+01    |
| .53537931+00         | .13712681+01           | .16152119+00           | .22779418+01           | .13511975+01    |
| .54105158+00         | .13726719+01           | .15894446+00           | .23152855+01           | .13911623+01    |
| .54685119+00         | .13738848+01           | .15676872+00           | .23486421+01           | .14265918+01    |
| .55065001+00         | .13751219+01           | .15459526+00           | .23837555+01           | .14636283+01    |
| .55545042+00         | .13763844+01           | .15242202+00           | .24207801+01           | .15024079+01    |
| .56025003+00         | .13776739+01           | .15024688+00           | .24598905+01           | .15430841+01    |
| .56504964+00         | .13789921+01           | .14806753+00           | .25012854+01           | .15858310+01    |
| .56897660+00         | .13800931+01           | .14627960+00           | .25370103+01           | .16224831+01    |
| .57290355+00         | .13812158+01           | .14448574+00           | .25745551+01           | .16607751+01    |
| .57683051+00         | .13823612+01           | .14268436+00           | .26140783+01           | .17008444+01    |
| .58075688+00         | .13835317+01           | .14087386+00           | .26557517+01           | .17428390+01    |

TABLE 128. (Concluded) <sup>p</sup>

$$M_{\infty} = .19999953+01$$

$$\Theta_s = .30543261+00$$

| $\underline{\Theta}$ | $\underline{M^*_1}$ | $\underline{\psi_1}$ | $\underline{x}$ | $\underline{r}$ |
|----------------------|---------------------|----------------------|-----------------|-----------------|
| .58468296+00         | .13847264+01        | .13905231+00         | .26997797+01    | .17869361+01    |
| .58773658+00         | .13856783+01        | .13762658+00         | .27357999+01    | .18228156+01    |
| .59079020+00         | .13866457+01        | .13619181+00         | .27735071+01    | .18601931+01    |
| .59384303+00         | .13876319+01        | .13474686+00         | .28130375+01    | .18991859+01    |
| .59689745+00         | .13886379+01        | .13329045+00         | .28545435+01    | .19399242+01    |
| .59995107+00         | .13896650+01        | .13182123+00         | .28981972+01    | .19825552+01    |
| .60213222+00         | .13904124+01        | .13024310+00         | .29308000+01    | .20142555+01    |
| .60431338+00         | .13911710+01        | .12969704+00         | .29646759+01    | .20470726+01    |
| .60649454+00         | .13919439+01        | .12862242+00         | .29999117+01    | .20810800+01    |
| .60867570+00         | .13927294+01        | .12753851+00         | .30366028+01    | .21163507+01    |
| .61085685+00         | .13935289+01        | .12644453+00         | .30748545+01    | .21529978+01    |
| .61216555+00         | .13940157+01        | .12578294+00         | .30986030+01    | .21756752+01    |
| .61347424+00         | .13945080+01        | .12511727+00         | .31229827+01    | .21989009+01    |
| .61478294+00         | .13950061+01        | .12444727+00         | .31480229+01    | .22226997+01    |
| .61609163+00         | .13955102+01        | .12377271+00         | .31737550+01    | .22470981+01    |
| .61740033+00         | .13960203+01        | .12309339+00         | .32002127+01    | .22721242+01    |
| .61870902+00         | .13965370+01        | .12240905+00         | .32274319+01    | .22970084+01    |
| .62001771+00         | .13970603+01        | .12171940+00         | .32554514+01    | .23241830+01    |
| .62132641+00         | .13975905+01        | .12102421+00         | .32843128+01    | .23512833+01    |
| .62263510+00         | .13981279+01        | .12032314+00         | .33140609+01    | .23791465+01    |
| .62394380+00         | .13986728+01        | .11961593+00         | .33447443+01    | .24078133+01    |
| .62525249+00         | .13992257+01        | .11890215+00         | .33764155+01    | .24373277+01    |
| .62656119+00         | .13997868+01        | .11818153+00         | .34091312+01    | .24677370+01    |
| .62786988+00         | .14003564+01        | .11745358+00         | .34429538+01    | .24990930+01    |
| .62917858+00         | .14009351+01        | .11671796+00         | .34779505+01    | .25314519+01    |
| .63048727+00         | .14015233+01        | .11597417+00         | .35141945+01    | .25648746+01    |
| .63179597+00         | .14021215+01        | .11522169+00         | .35517673+01    | .25994285+01    |
| .63310466+00         | .14027301+01        | .11445997+00         | .35907569+01    | .26351870+01    |
| .63441335+00         | .14033498+01        | .11368849+00         | .36312614+01    | .26722312+01    |
| .63572205+00         | .14039813+01        | .11290653+00         | .36733885+01    | .27106502+01    |
| .63603823+00         | .14041357+01        | .11271599+00         | .36838228+01    | .27201492+01    |

$$.56693479-02 = \Delta S/R$$

$$.18809025+01 = P_s/P_{\infty}$$

$$.14575773+01 = \rho_s/\rho_{\infty}$$

$$.12904308+01 = T_s/T_{\infty}$$

TABLE 129. CONICAL FLOWFIELD  $\theta_s = 17.5 \text{ DEG}$ ;  $M_\infty = 2.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .73982656+00 | .24999894+01 | .30543261+00 | .54395503+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .30543261+00 | .14796254+01 | .30543261+00 | .15857974+01 | .50000000+00 |
| .31241392+00 | .14796951+01 | .29860118+00 | .16005607+01 | .51696698+00 |
| .31939524+00 | .14798944+01 | .29205186+00 | .16159454+01 | .53442942+00 |
| .32637655+00 | .14802109+01 | .28576038+00 | .16320484+01 | .55241785+00 |
| .33335786+00 | .14806336+01 | .27970510+00 | .16488498+01 | .57096539+00 |
| .33990284+00 | .14811184+01 | .27422550+00 | .16652930+01 | .58889351+00 |
| .34644783+00 | .14816819+01 | .26892191+00 | .16824466+01 | .60737702+00 |
| .35299281+00 | .14823184+01 | .26378109+00 | .17003542+01 | .62645093+00 |
| .35953779+00 | .14830233+01 | .25879091+00 | .17190636+01 | .64615344+00 |
| .36564644+00 | .14837390+01 | .25425943+00 | .17372956+01 | .66514632+00 |
| .37175509+00 | .14845074+01 | .24984697+00 | .17563188+01 | .68475997+00 |
| .37786373+00 | .14853261+01 | .24552763+00 | .17761844+01 | .70503467+00 |
| .38397238+00 | .14861929+01 | .24131201+00 | .17969490+01 | .72601441+00 |
| .38964470+00 | .14870390+01 | .23747888+00 | .18170896+01 | .74616901+00 |
| .39531702+00 | .14879238+01 | .23371865+00 | .18381135+01 | .76701534+00 |
| .40098934+00 | .14888462+01 | .23002627+00 | .18600806+01 | .78859954+00 |
| .40666165+00 | .14898055+01 | .22639686+00 | .18830570+01 | .81097233+00 |
| .41169764+00 | .14907231+01 | .22309843+00 | .19052249+01 | .83237215+00 |
| .41713362+00 | .14916712+01 | .21984604+00 | .19283781+01 | .85453940+00 |
| .42236961+00 | .14926497+01 | .21663618+00 | .19525864+01 | .87752692+00 |
| .42760559+00 | .14936586+01 | .21346541+00 | .19779267+01 | .90139293+00 |
| .43240524+00 | .14946101+01 | .21059034+00 | .20022222+01 | .92409639+00 |
| .43720490+00 | .14955876+01 | .20774262+00 | .20276130+01 | .94764633+00 |
| .44200455+00 | .14965911+01 | .20491965+00 | .20541794+01 | .97210275+00 |
| .44680420+00 | .14976212+01 | .20211887+00 | .20820102+01 | .99753194+00 |
| .45116752+00 | .14985813+01 | .19958967+00 | .21084911+01 | .10215551+01 |
| .45553084+00 | .14995642+01 | .19707456+00 | .21361809+01 | .10465040+01 |
| .45989417+00 | .15005708+01 | .19457147+00 | .21651706+01 | .10724457+01 |
| .46425749+00 | .15016016+01 | .19207823+00 | .21955619+01 | .10994553+01 |
| .46818447+00 | .15025508+01 | .18964090+00 | .22242056+01 | .11247452+01 |
| .47211146+00 | .15035211+01 | .18760813+00 | .22541674+01 | .11510343+01 |
| .47603845+00 | .15045132+01 | .18537809+00 | .22855495+01 | .11783971+01 |
| .47996544+00 | .15055281+01 | .18314898+00 | .23184653+01 | .12069163+01 |
| .48345610+00 | .15064501+01 | .18116675+00 | .23491136+01 | .12333119+01 |
| .48694675+00 | .15073918+01 | .17918223+00 | .23811734+01 | .12607661+01 |
| .49043741+00 | .15083539+01 | .17719394+00 | .24147553+01 | .12893589+01 |
| .49392805+00 | .15093380+01 | .17520031+00 | .24499830+01 | .13191795+01 |
| .49698232+00 | .15102182+01 | .17345024+00 | .24822655+01 | .13463575+01 |
| .50003658+00 | .15111167+01 | .17169335+00 | .25160176+01 | .13746262+01 |
| .50309020+00 | .15120341+01 | .16992763+00 | .25513470+01 | .14040617+01 |

TABLE 129. (Concluded)

$$M_{\infty} = .24999894+01$$

$$\Theta_s = .30543261+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .50614382+00 | .15129717+01 | .16815222+00 | .25883902+01 | .14347625+01 |
| .50876121+00 | .15137921+01 | .16662169+00 | .26216146+01 | .14621621+01 |
| .51137860+00 | .15146289+01 | .16508171+00 | .26563056+01 | .14906391+01 |
| .51399599+00 | .15154830+01 | .16353108+00 | .26925763+01 | .15202737+01 |
| .51661338+00 | .15163553+01 | .16194857+00 | .27305533+01 | .15511554+01 |
| .51879454+00 | .15170970+01 | .16065630+00 | .27636052+01 | .15779143+01 |
| .52097569+00 | .15178529+01 | .15933389+00 | .27980308+01 | .16056726+01 |
| .52315685+00 | .15186235+01 | .15800033+00 | .28339311+01 | .16345015+01 |
| .52533801+00 | .15194099+01 | .15665451+00 | .28714176+01 | .16644792+01 |
| .52708293+00 | .15200509+01 | .15556827+00 | .29026327+01 | .16893473+01 |
| .52882786+00 | .15207031+01 | .15447282+00 | .29350135+01 | .17150562+01 |
| .53057279+00 | .15213670+01 | .15336743+00 | .29686376+01 | .17416601+01 |
| .53231771+00 | .15220432+01 | .15225135+00 | .30035902+01 | .17692186+01 |
| .53362641+00 | .15225588+01 | .15140676+00 | .30307328+01 | .17905532+01 |
| .53493510+00 | .15230821+01 | .15055532+00 | .30587192+01 | .18124918+01 |
| .53624380+00 | .15236133+01 | .14969662+00 | .30875961+01 | .18350670+01 |
| .53755249+00 | .15241528+01 | .14883020+00 | .31174147+01 | .18583144+01 |
| .53886119+00 | .15247009+01 | .14795560+00 | .31482303+01 | .18822723+01 |
| .54016988+00 | .15252582+01 | .14707233+00 | .31801032+01 | .19069825+01 |
| .54147857+00 | .15258250+01 | .14617980+00 | .32130997+01 | .19324907+01 |
| .54278727+00 | .15264018+01 | .14527746+00 | .32472915+01 | .19588466+01 |
| .54395503+00 | .15269254+01 | .14446347+00 | .32788748+01 | .19831243+01 |

$$.17943040-01 = \Delta S/R$$

$$.22604788+01 = P_s/P_{\infty}$$

$$.16195669+01 = \rho_s/\rho_{\infty}$$

$$.13957305+01 = T_s/T_{\infty}$$



TABLE 130. CONICAL FLOWFIELD  $\theta_s = 17.5 \text{ DEG}$ ;  $M_\infty = 3.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .78788327+00 | .29999945+01 | .30543261+00 | .49116692+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .30543261+00 | .15757370+01 | .30543261+00 | .15857974+01 | .50000000+00 |
| .31066860+00 | .15757791+01 | .30028134+00 | .15998522+01 | .51365633+00 |
| .31590458+00 | .15759010+01 | .29529102+00 | .16144319+01 | .52767763+00 |
| .32114056+00 | .15760967+01 | .29044979+00 | .16295637+01 | .54208365+00 |
| .32637655+00 | .15763612+01 | .28574684+00 | .16452776+01 | .55689569+00 |
| .33161253+00 | .15766899+01 | .28117226+00 | .16616057+01 | .57213669+00 |
| .33684852+00 | .15770787+01 | .27671697+00 | .16785834+01 | .58783148+00 |
| .34206450+00 | .15775242+01 | .27237251+00 | .16962486+01 | .60400687+00 |
| .34732049+00 | .15780234+01 | .26813107+00 | .17146429+01 | .62069198+00 |
| .35255647+00 | .15785736+01 | .26398536+00 | .17338120+01 | .63791852+00 |
| .35779246+00 | .15791724+01 | .25992852+00 | .17538057+01 | .65572098+00 |
| .36215578+00 | .15797072+01 | .25661104+00 | .17711362+01 | .67102338+00 |
| .36651910+00 | .15802735+01 | .25334723+00 | .17891117+01 | .68677553+00 |
| .37088242+00 | .15808703+01 | .25013371+00 | .18077695+01 | .70300300+00 |
| .37524574+00 | .15814970+01 | .24696717+00 | .18271503+01 | .71973353+00 |
| .37960906+00 | .15821530+01 | .24384446+00 | .18472983+01 | .73699718+00 |
| .38397238+00 | .15828378+01 | .24076249+00 | .18682618+01 | .75462665+00 |
| .38833570+00 | .15835511+01 | .23771825+00 | .18900936+01 | .77325760+00 |
| .39269903+00 | .15842926+01 | .23470879+00 | .19128514+01 | .79232884+00 |
| .39706235+00 | .15850621+01 | .23173124+00 | .19365987+01 | .81208308+00 |
| .40142567+00 | .15858598+01 | .22878268+00 | .19614054+01 | .83256707+00 |
| .40491632+00 | .15866518+01 | .22644282+00 | .19820653+01 | .84951413+00 |
| .40840698+00 | .15871948+01 | .22411817+00 | .20034962+01 | .86699005+00 |
| .41189764+00 | .15878897+01 | .22180730+00 | .20257449+01 | .88502599+00 |
| .41538829+00 | .15886032+01 | .21950873+00 | .20488630+01 | .90365606+00 |
| .41887895+00 | .15893355+01 | .21722089+00 | .20729068+01 | .92291740+00 |
| .42236961+00 | .15900870+01 | .21494224+00 | .20979379+01 | .94285049+00 |
| .42586026+00 | .15908581+01 | .21267122+00 | .21240242+01 | .96349990+00 |
| .42935092+00 | .15916493+01 | .21040613+00 | .21512401+01 | .98491442+00 |
| .43284158+00 | .15924611+01 | .20814527+00 | .21796681+01 | .10071478+01 |
| .43633223+00 | .15932943+01 | .20588687+00 | .22093996+01 | .10302597+01 |
| .43895023+00 | .15939335+01 | .20419356+00 | .22326141+01 | .10482095+01 |
| .44156822+00 | .15945856+01 | .20249975+00 | .22566658+01 | .10667208+01 |
| .44418621+00 | .15952508+01 | .20080461+00 | .22816060+01 | .10858269+01 |
| .44680420+00 | .15959295+01 | .19910717+00 | .23074908+01 | .11055641+01 |
| .44942216+00 | .15966232+01 | .19740672+00 | .23343809+01 | .11259713+01 |
| .45204011+00 | .15973315+01 | .19570212+00 | .23623437+01 | .11470920+01 |
| .45465805+00 | .15980550+01 | .19399215+00 | .23914531+01 | .11689734+01 |
| .45727600+00 | .15987944+01 | .19227573+00 | .24217905+01 | .11916679+01 |
| .45989395+00 | .15995502+01 | .19055158+00 | .24534459+01 | .12152327+01 |

TABLE 130. (Concluded)

| $M_{\infty} = .29999945+01$ |              |              |              |              | $\Theta_s = .30543261+00$ |  |  |  |  |
|-----------------------------|--------------|--------------|--------------|--------------|---------------------------|--|--|--|--|
| $\Theta$                    | $M_1^*$      | $\psi_1$     | $x$          | $r$          |                           |  |  |  |  |
| .46251190+00                | .16003233+01 | .18881845+00 | .24865195+01 | .12397318+01 |                           |  |  |  |  |
| .46425720+00                | .16008488+01 | .18765729+00 | .25094106+01 | .12566160+01 |                           |  |  |  |  |
| .46600249+00                | .16013826+01 | .18649102+00 | .25330175+01 | .12739737+01 |                           |  |  |  |  |
| .46774779+00                | .16019250+01 | .18531915+00 | .25573789+01 | .12918236+01 |                           |  |  |  |  |
| .46949309+00                | .16024764+01 | .18414120+00 | .25825372+01 | .13161943+01 |                           |  |  |  |  |
| .47123839+00                | .16030372+01 | .18295658+00 | .26085380+01 | .13291148+01 |                           |  |  |  |  |
| .47298369+00                | .16036077+01 | .18176473+00 | .26354310+01 | .13486163+01 |                           |  |  |  |  |
| .47472899+00                | .16041883+01 | .18056504+00 | .26632704+01 | .13687332+01 |                           |  |  |  |  |
| .47647429+00                | .16047795+01 | .17935684+00 | .26921150+01 | .13895021+01 |                           |  |  |  |  |
| .47821958+00                | .16053818+01 | .17813937+00 | .27220296+01 | .14109639+01 |                           |  |  |  |  |
| .47996488+00                | .16059956+01 | .17691191+00 | .27530849+01 | .14331629+01 |                           |  |  |  |  |
| .48083753+00                | .16063070+01 | .17629414+00 | .27690643+01 | .14445539+01 |                           |  |  |  |  |
| .48171018+00                | .16066216+01 | .17567358+00 | .27853588+01 | .14561479+01 |                           |  |  |  |  |
| .48258283+00                | .16069394+01 | .17505000+00 | .28019794+01 | .14679518+01 |                           |  |  |  |  |
| .48345548+00                | .16072604+01 | .17442339+00 | .28189375+01 | .14799727+01 |                           |  |  |  |  |
| .48432813+00                | .16075848+01 | .17379360+00 | .28362456+01 | .14922183+01 |                           |  |  |  |  |
| .48520078+00                | .16079127+01 | .17316047+00 | .28539164+01 | .15046967+01 |                           |  |  |  |  |
| .48607343+00                | .16082442+01 | .17252387+00 | .28719634+01 | .15174161+01 |                           |  |  |  |  |
| .48694608+00                | .16085793+01 | .17188362+00 | .28904012+01 | .15303857+01 |                           |  |  |  |  |
| .48781873+00                | .16089182+01 | .17123968+00 | .29092447+01 | .15436148+01 |                           |  |  |  |  |
| .48869137+00                | .16092610+01 | .17059179+00 | .29285100+01 | .15571133+01 |                           |  |  |  |  |
| .48956402+00                | .16096078+01 | .16993980+00 | .29482142+01 | .15708919+01 |                           |  |  |  |  |
| .49043667+00                | .16099588+01 | .16928354+00 | .29683751+01 | .15849615+01 |                           |  |  |  |  |
| .49116692+00                | .16102557+01 | .16873094+00 | .29856110+01 | .15969674+01 |                           |  |  |  |  |

$$.41562513-01 = \Delta S/R$$

$$.27189982+01 = P_s/P_{\infty}$$

$$.17923375+01 = \rho_s/\rho_{\infty}$$

$$.15170124+01 = T_s/T_{\infty}$$

TABLE 131. CONICAL FLOWFIELD  $\theta_s = 17.5 \text{ DEG}$ ;  $M_\infty = 4.0$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .84525219+00 | .39999914+01 | .30543261+00 | .43509833+00 |              |
| $\theta$     | $M^*_1$      | $\psi_1$     | $x$          | $r$          |
| .30543261+00 | .16904727+01 | .30543261+00 | .15857974+01 | .50000000+00 |
| .30892327+00 | .16904930+01 | .30197979+00 | .15983561+01 | .51010047+00 |
| .31241392+00 | .16905523+01 | .29859951+00 | .16112964+01 | .52043451+00 |
| .31590458+00 | .16906488+01 | .29528734+00 | .16246353+01 | .53101263+00 |
| .31939524+00 | .16907806+01 | .29203913+00 | .16383912+01 | .54184604+00 |
| .32288589+00 | .16909461+01 | .28885100+00 | .16525836+01 | .55294671+00 |
| .32637655+00 | .16911440+01 | .28571928+00 | .16672338+01 | .56432747+00 |
| .32986721+00 | .16913730+01 | .28264054+00 | .16823643+01 | .57600201+00 |
| .33335786+00 | .16916320+01 | .27961149+00 | .16979994+01 | .58798496+00 |
| .33684852+00 | .16919198+01 | .27662903+00 | .17141653+01 | .60029209+00 |
| .34033918+00 | .16922357+01 | .27369018+00 | .17308901+01 | .61294027+00 |
| .34382983+00 | .16925789+01 | .27079210+00 | .17482044+01 | .62594772+00 |
| .34732049+00 | .16929487+01 | .26793206+00 | .17661410+01 | .63933405+00 |
| .35081115+00 | .16933444+01 | .26510739+00 | .17847358+01 | .65312047+00 |
| .35430180+00 | .16937656+01 | .26231552+00 | .18040275+01 | .66732996+00 |
| .35779246+00 | .16942120+01 | .25955394+00 | .18240583+01 | .68198738+00 |
| .36041045+00 | .16945630+01 | .25750114+00 | .18395939+01 | .69329058+00 |
| .36302844+00 | .16949279+01 | .25546297+00 | .18555922+01 | .70487325+00 |
| .36564644+00 | .16953066+01 | .25343841+00 | .18720754+01 | .71674853+00 |
| .36826443+00 | .16956990+01 | .25142644+00 | .18890676+01 | .72893043+00 |
| .37088242+00 | .16961052+01 | .24942605+00 | .19065946+01 | .74143399+00 |
| .37350041+00 | .16965251+01 | .24743623+00 | .19246842+01 | .75427537+00 |
| .37611841+00 | .16969588+01 | .24545595+00 | .19433661+01 | .76747189+00 |
| .37873640+00 | .16974064+01 | .24348410+00 | .19626728+01 | .78104225+00 |
| .38135439+00 | .16978680+01 | .24151989+00 | .19826391+01 | .79500660+00 |
| .38397238+00 | .16983438+01 | .23956199+00 | .20033026+01 | .80938668+00 |
| .38659038+00 | .16988339+01 | .23760942+00 | .20247043+01 | .82420599+00 |
| .38920837+00 | .16993385+01 | .23566106+00 | .20468886+01 | .83949004+00 |
| .39182636+00 | .16998580+01 | .23371575+00 | .20699039+01 | .85526666+00 |
| .39444435+00 | .17003926+01 | .23177230+00 | .20938035+01 | .87156613+00 |
| .39706235+00 | .17009427+01 | .22982947+00 | .21186452+01 | .88842150+00 |
| .39880767+00 | .17013181+01 | .22853396+00 | .21357609+01 | .89998501+00 |
| .40055300+00 | .17017008+01 | .22723776+00 | .21533439+01 | .91182318+00 |
| .40229832+00 | .17020911+01 | .22594050+00 | .21714158+01 | .92394830+00 |
| .40404362+00 | .17024893+01 | .22464177+00 | .21900001+01 | .93637364+00 |
| .40578892+00 | .17028951+01 | .22334107+00 | .22091219+01 | .94911335+00 |
| .40753422+00 | .17033089+01 | .22203794+00 | .22288079+01 | .96218251+00 |
| .40927952+00 | .17037307+01 | .22073182+00 | .22490871+01 | .97559749+00 |
| .41102482+00 | .17041607+01 | .21942229+00 | .22699900+01 | .98937549+00 |
| .41277011+00 | .17045993+01 | .21810872+00 | .22915504+01 | .10035354+01 |

TABLE 131. (Concluded)

$$M_{\infty} = .39999914+01$$

$$\Theta_s = .30543261+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .41451541+00 | .17050467+01 | .21679062+00 | .23138043+01 | .10180975+01 |
| .41626071+00 | .17055031+01 | .21546733+00 | .23367905+01 | .10330834+01 |
| .41800601+00 | .17059689+01 | .21413824+00 | .23605517+01 | .10485170+01 |
| .41975131+00 | .17064445+01 | .21280268+00 | .23851335+01 | .10644237+01 |
| .42149661+00 | .17069301+01 | .21145993+00 | .24105863+01 | .10808317+01 |
| .42324191+00 | .17074261+01 | .21010916+00 | .24369646+01 | .10977712+01 |
| .42411456+00 | .17076782+01 | .20943056+00 | .24505194+01 | .11064506+01 |
| .42498720+00 | .17079331+01 | .20874963+00 | .24643284+01 | .11152755+01 |
| .42585985+00 | .17081908+01 | .20806628+00 | .24784003+01 | .11242508+01 |
| .42673250+00 | .17084515+01 | .20738040+00 | .24927437+01 | .11333812+01 |
| .42760515+00 | .17087151+01 | .20669184+00 | .25073679+01 | .11426718+01 |
| .42847780+00 | .17089817+01 | .20600048+00 | .25222826+01 | .11521281+01 |
| .42935045+00 | .17092515+01 | .20530619+00 | .25374982+01 | .11617557+01 |
| .43022310+00 | .17095245+01 | .20460887+00 | .25530254+01 | .11715606+01 |
| .43109575+00 | .17098008+01 | .20390830+00 | .25688756+01 | .11815490+01 |
| .43196840+00 | .17100804+01 | .20320437+00 | .25850608+01 | .11917275+01 |
| .43284105+00 | .17103635+01 | .20249690+00 | .26015936+01 | .12021031+01 |
| .43371370+00 | .17106502+01 | .20178578+00 | .26184876+01 | .12126832+01 |
| .43458635+00 | .17109405+01 | .20107076+00 | .26357569+01 | .12234755+01 |
| .43509833+00 | .17111125+01 | .20064938+00 | .26460694+01 | .12299095+01 |

$$.12776150+00 = \Delta S/R$$

$$.38709522+01 = P_s/P_{\infty}$$

$$.21403684+01 = \rho_s/\rho_{\infty}$$

$$.18085449+01 = T_s/T_{\infty}$$

13 TABLE 132. CONICAL FLOWFIELD  $\theta_s = 17.5 \text{ DEG}$ ;  $M_\infty = 5.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .87612696+00 | .49999836+01 | .30543261+00 | .40729478+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .30543261+00 | .17522210+01 | .30543261+00 | .15857974+01 | .50000000+00 |
| .30892327+00 | .17522421+01 | .30197965+00 | .16008273+01 | .51008912+00 |
| .31241392+00 | .17523036+01 | .29859848+00 | .16163826+01 | .52207732+00 |
| .31590458+00 | .17524036+01 | .29528373+00 | .16324916+01 | .53358048+00 |
| .31939524+00 | .17525405+01 | .29203122+00 | .16491848+01 | .54541569+00 |
| .32288589+00 | .17527125+01 | .28883585+00 | .16664948+01 | .55760130+00 |
| .32637655+00 | .17529184+01 | .28569359+00 | .16844575+01 | .57015734+00 |
| .32943087+00 | .17531255+01 | .28298452+00 | .17007410+01 | .58146478+00 |
| .33248520+00 | .17533569+01 | .28031044+00 | .17175824+01 | .59308808+00 |
| .33553952+00 | .17536121+01 | .27766899+00 | .17350122+01 | .60504410+00 |
| .33859385+00 | .17538904+01 | .27505766+00 | .17530637+01 | .61735112+00 |
| .34164817+00 | .17541916+01 | .27247418+00 | .17717727+01 | .63002885+00 |
| .34470250+00 | .17545152+01 | .26991628+00 | .17911782+01 | .64309862+00 |
| .34773204+00 | .17548102+01 | .26774247+00 | .18083979+01 | .65463065+00 |
| .34993848+00 | .17551214+01 | .26568443+00 | .18261896+01 | .66648392+00 |
| .35255647+00 | .17554486+01 | .26344078+00 | .18445844+01 | .67867485+00 |
| .35517447+00 | .17557918+01 | .26131018+00 | .18636162+01 | .69122194+00 |
| .35779246+00 | .17561510+01 | .25919122+00 | .18833220+01 | .70414516+00 |
| .36041045+00 | .17565262+01 | .25708253+00 | .19037414+01 | .71746594+00 |
| .36259211+00 | .17568513+01 | .25533213+00 | .19213339+01 | .72888706+00 |
| .36477377+00 | .17571875+01 | .25358708+00 | .19394792+01 | .74061500+00 |
| .36695543+00 | .17575351+01 | .25184653+00 | .19582065+01 | .75266545+00 |
| .36913709+00 | .17578942+01 | .25010964+00 | .19775476+01 | .76505538+00 |
| .37131875+00 | .17582649+01 | .24837552+00 | .19975364+01 | .77780288+00 |
| .37350041+00 | .17586474+01 | .24664432+00 | .20182098+01 | .79092767+00 |
| .37524574+00 | .17589620+01 | .24525822+00 | .20352685+01 | .80171346+00 |
| .37699107+00 | .17592844+01 | .24387326+00 | .20528130+01 | .81276605+00 |
| .37873640+00 | .17596147+01 | .24248791+00 | .20708672+01 | .82409800+00 |
| .38048172+00 | .17599532+01 | .24110166+00 | .20894566+01 | .83572285+00 |
| .38222702+00 | .17603005+01 | .23971399+00 | .21086081+01 | .84765478+00 |
| .38397232+00 | .17606562+01 | .23832433+00 | .21283515+01 | .85990952+00 |
| .38528129+00 | .17609286+01 | .23728039+00 | .21435664+01 | .86932236+00 |
| .38659026+00 | .17612060+01 | .23623470+00 | .21591464+01 | .87893368+00 |
| .38789924+00 | .17614883+01 | .23518699+00 | .21751066+01 | .88875140+00 |
| .38920821+00 | .17617758+01 | .23413698+00 | .21914631+01 | .89878396+00 |
| .39051719+00 | .17620685+01 | .23308438+00 | .22082331+01 | .90904038+00 |
| .39182616+00 | .17623666+01 | .23202886+00 | .22254347+01 | .91953013+00 |
| .39269881+00 | .17625684+01 | .23132342+00 | .22371519+01 | .92665792+00 |
| .39357146+00 | .17627726+01 | .23061645+00 | .22490756+01 | .93389710+00 |
| .39444411+00 | .17629794+01 | .22990783+00 | .22612122+01 | .94125099+00 |



TABLE 132. (Concluded)

$$M_{\infty} = .49999634+01$$

$$\Theta_s = .30543261+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .39531476+00 | .17631007+01 | .22919748+00 | .22735685+01 | .94872305+00 |
| .39610941+00 | .17634007+01 | .22048528+00 | .22861512+01 | .95631687+00 |
| .39706206+00 | .17636193+01 | .22777112+00 | .22989677+01 | .96403623+00 |
| .39749430+00 | .17637236+01 | .22741326+00 | .23054662+01 | .96794429+00 |
| .39793471+00 | .17638326+01 | .22705487+00 | .23120258+01 | .97188514+00 |
| .39837103+00 | .17639423+01 | .22669594+00 | .23186478+01 | .97585945+00 |
| .39880736+00 | .17640527+01 | .22633643+00 | .23253333+01 | .97986775+00 |
| .39924360+00 | .17641638+01 | .22597634+00 | .23320832+01 | .98391052+00 |
| .39968000+00 | .17642757+01 | .22561566+00 | .23388986+01 | .98798837+00 |
| .40011633+00 | .17643882+01 | .22525436+00 | .23457807+01 | .99210185+00 |
| .40055265+00 | .17645015+01 | .22489243+00 | .23527306+01 | .99625158+00 |
| .40098898+00 | .17646155+01 | .22452986+00 | .23597496+01 | .10004382+01 |
| .40142530+00 | .17647302+01 | .22416662+00 | .23668387+01 | .10046622+01 |
| .40186163+00 | .17648457+01 | .22380269+00 | .23739991+01 | .10089243+01 |
| .40229795+00 | .17649620+01 | .22343806+00 | .23812324+01 | .10132253+01 |
| .40273428+00 | .17650790+01 | .22307269+00 | .23885398+01 | .10175657+01 |
| .40317060+00 | .17651969+01 | .22270660+00 | .23959223+01 | .10219462+01 |
| .40360693+00 | .17653155+01 | .22233976+00 | .24033817+01 | .10263675+01 |
| .40404325+00 | .17654349+01 | .22197212+00 | .24109190+01 | .10308304+01 |
| .40447957+00 | .17655551+01 | .22160371+00 | .24185359+01 | .10353355+01 |
| .40491590+00 | .17656761+01 | .22123447+00 | .24262339+01 | .10398838+01 |
| .40535222+00 | .17657980+01 | .22086436+00 | .24340145+01 | .10444759+01 |
| .40578855+00 | .17659207+01 | .22049340+00 | .24418792+01 | .10491126+01 |
| .40622487+00 | .17660443+01 | .22012158+00 | .24498297+01 | .10537949+01 |
| .40666120+00 | .17661687+01 | .21974881+00 | .24578677+01 | .10585235+01 |
| .40709752+00 | .17662940+01 | .21937512+00 | .24659948+01 | .10632994+01 |
| .40729478+00 | .17663509+01 | .21920586+00 | .24696989+01 | .10654743+01 |

$$.26073551+00 = \Delta S/R$$

$$.53391268+01 = P_g/P_{\infty}$$

$$.24613743+01 = \rho_s/\rho_{\infty}$$

$$.21691650+01 = T_s/T_{\infty}$$

13 TABLE 133. CONICAL FLOWFIELD  $\theta_s = 17.5 \text{ DEG}$ ;  $M_\infty = 6.0$

| $\underline{u}_s$    | $\underline{M}_\infty$ | $\underline{\theta}_s$ | $\underline{\theta}_w$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .89433881+00         | .60000007+C1           | .30543261+00           | .39150335+00           |                 |
| $\underline{\theta}$ | $\underline{M}_1^*$    | $\underline{\psi}_1$   | $\underline{x}$        | $\underline{r}$ |
| .30543261+00         | .17886441+01           | .30543261+00           | .15857974+01           | .50000000+00    |
| .30805060+00         | .17886562+01           | .30283591+00           | .15984254+01           | .50858605+00    |
| .31066860+00         | .17886919+01           | .30028004+00           | .16114149+01           | .51736870+00    |
| .31328659+00         | .17887503+01           | .29776252+00           | .16247819+01           | .52635648+00    |
| .31590458+00         | .17888305+01           | .29528097+00           | .16385436+01           | .53555856+00    |
| .31852257+00         | .17889320+01           | .29283316+00           | .16527181+01           | .54498467+00    |
| .32114056+00         | .17890540+01           | .29041694+00           | .16673248+01           | .55464511+00    |
| .32375856+00         | .17891959+01           | .28803029+00           | .16823850+01           | .56455112+00    |
| .32637655+00         | .17893573+01           | .28567120+00           | .16979210+01           | .57471449+00    |
| .32899454+00         | .17895378+01           | .28333781+00           | .17139569+01           | .58514804+00    |
| .33117620+00         | .17897024+01           | .28141161+00           | .17277209+01           | .59405886+00    |
| .33335786+00         | .17898798+01           | .27950094+00           | .17418660+01           | .60317513+00    |
| .33553952+00         | .17900697+01           | .27760477+00           | .17564098+01           | .61250598+00    |
| .33772118+00         | .17902721+01           | .27572211+00           | .17713705+01           | .62206098+00    |
| .33990284+00         | .17904868+01           | .27385196+00           | .17867675+01           | .63185025+00    |
| .34208450+00         | .17907137+01           | .27199336+00           | .18026221+01           | .64188480+00    |
| .34426617+00         | .17909528+01           | .27014532+00           | .18189567+01           | .65217630+00    |
| .34644783+00         | .17912040+01           | .26830688+00           | .18357952+01           | .66273711+00    |
| .34862949+00         | .17914673+01           | .26647707+00           | .18531636+01           | .67358076+00    |
| .35081115+00         | .17916867+01           | .26501877+00           | .18674587+01           | .68246895+00    |
| .35212014+00         | .17919138+01           | .26356486+00           | .18821261+01           | .69155523+00    |
| .35386547+00         | .17921488+01           | .26211483+00           | .18971820+01           | .70084794+00    |
| .35561080+00         | .17923915+01           | .26066816+00           | .19126440+01           | .71035600+00    |
| .35735613+00         | .17926422+01           | .25922433+00           | .19285302+01           | .72008685+00    |
| .35910146+00         | .17929008+01           | .25778281+00           | .19448607+01           | .73005664+00    |
| .36084678+00         | .17931674+01           | .25634303+00           | .19616565+01           | .74027012+00    |
| .36259211+00         | .17934422+01           | .25490446+00           | .19789401+01           | .75074081+00    |
| .36433744+00         | .17937252+01           | .25346649+00           | .19967357+01           | .76148099+00    |
| .36564644+00         | .17939429+01           | .25238807+00           | .20104340+01           | .76972092+00    |
| .36695543+00         | .17941654+01           | .25130941+00           | .20244468+01           | .77812587+00    |
| .36826443+00         | .17943927+01           | .25023024+00           | .20387862+01           | .78670200+00    |
| .36957340+00         | .17946254+01           | .24915033+00           | .20534652+01           | .79545587+00    |
| .37088238+00         | .17948631+01           | .24806936+00           | .20684980+01           | .80439465+00    |
| .37219135+00         | .17951058+01           | .24698703+00           | .20838991+01           | .81352568+00    |
| .37350032+00         | .17953537+01           | .24590304+00           | .20996843+01           | .82285695+00    |
| .37480930+00         | .17956067+01           | .24481708+00           | .21158703+01           | .83239678+00    |
| .37611827+00         | .17958651+01           | .24372881+00           | .21324748+01           | .84215413+00    |
| .37742724+00         | .17961095+01           | .24300186+00           | .21437862+01           | .84878451+00    |
| .37873622+00         | .17962182+01           | .24227363+00           | .21552980+01           | .85551874+00    |
| .37873622+00         | .17963985+01           | .24154402+00           | .21670161+01           | .86235984+00    |

TABLE 133. (Concluded)

$$M_{\infty} = .60000007+01$$

$$\Theta_s = .30543261+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .37960887+00 | .17965812+01 | .24081292+00 | .21789470+01 | .86931109+00 |
| .38048152+00 | .17967666+01 | .24068021+00 | .21910977+01 | .87637591+00 |
| .38135417+00 | .17969545+01 | .23934579+00 | .22034751+01 | .88355776+00 |
| .38222682+00 | .17971452+01 | .23860953+00 | .22160867+01 | .89086041+00 |
| .38309947+00 | .17973385+01 | .23787128+00 | .22289403+01 | .89826772+00 |
| .38397212+00 | .17975346+01 | .23713093+00 | .22420439+01 | .90584369+00 |
| .38440844+00 | .17976337+01 | .23675992+00 | .22486921+01 | .90967127+00 |
| .38484477+00 | .17977335+01 | .23638833+00 | .22554061+01 | .91353264+00 |
| .38528109+00 | .17978340+01 | .23601616+00 | .22621871+01 | .91742840+00 |
| .38571741+00 | .17979353+01 | .23564336+00 | .22690361+01 | .92135907+00 |
| .38615374+00 | .17980373+01 | .23526993+00 | .22759545+01 | .92532533+00 |
| .38659006+00 | .17981400+01 | .23489584+00 | .22829434+01 | .92932775+00 |
| .38702639+00 | .17982435+01 | .23452109+00 | .22900041+01 | .93336695+00 |
| .38746271+00 | .17983477+01 | .23414564+00 | .22971379+01 | .93744357+00 |
| .38789904+00 | .17984527+01 | .23376948+00 | .23043460+01 | .94155826+00 |
| .38833536+00 | .17985585+01 | .23339260+00 | .23116300+01 | .94571173+00 |
| .38877169+00 | .17986651+01 | .23301496+00 | .23189911+01 | .94990464+00 |
| .38920801+00 | .17987724+01 | .23263653+00 | .23264310+01 | .95413776+00 |
| .38964434+00 | .17988806+01 | .23225733+00 | .23339509+01 | .95841178+00 |
| .39008066+00 | .17989896+01 | .23187730+00 | .23415526+01 | .96272749+00 |
| .39051699+00 | .17990993+01 | .23149642+00 | .23492376+01 | .96708568+00 |
| .39095331+00 | .17992100+01 | .23111468+00 | .23570076+01 | .97148719+00 |
| .39138963+00 | .17993214+01 | .23073205+00 | .23648639+01 | .97593269+00 |
| .39150335+00 | .17993506+01 | .23063218+00 | .23669259+01 | .97709865+00 |

$$.42698318+00 = \Delta S/R$$

$$.71264619+01 = P_s/P_{\infty}$$

$$.27386551+01 = \rho_s/\rho_{\infty}$$

$$.26021758+01 = T_s/T_{\infty}$$

TABLE 134. CONICAL FLOWFIELD  $\theta_s = 17.5 \text{ DEG}$ ;  $M_\infty = 8.0$

| $u_s$         | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|---------------|--------------|--------------|--------------|--------------|
| .91361190+00  | .79999771+01 | .30543261+00 | .37520196+00 |              |
| $\theta$      | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .30543261+00  | .18271895+01 | .30543261+00 | .15857974+01 | .50000000+00 |
| .30717794+00  | .18271951+01 | .30369679+00 | .15954348+01 | .50610170+00 |
| .30892327+00  | .18272114+01 | .30197937+00 | .16052772+01 | .51230927+00 |
| .31066860+00  | .18272384+01 | .30027946+00 | .16153313+01 | .51862610+00 |
| .31241392+00  | .18272757+01 | .29859621+00 | .16256042+01 | .52505582+00 |
| .31415925+00  | .18273230+01 | .29692682+00 | .16361036+01 | .53160225+00 |
| .31590458+00  | .18273802+01 | .29527647+00 | .16468372+01 | .53826935+00 |
| .31764991+00  | .18274470+01 | .29363840+00 | .16578135+01 | .54506131+00 |
| .31939524+00  | .18275234+01 | .29201387+00 | .16690412+01 | .55198255+00 |
| .32114056+00  | .18276090+01 | .29040216+00 | .16805294+01 | .55903770+00 |
| .32288589+00  | .18277038+01 | .28880256+00 | .16922881+01 | .56623162+00 |
| .32463122+00  | .18278077+01 | .28721437+00 | .17043274+01 | .57356948+00 |
| .32637655+00  | .18279204+01 | .28563693+00 | .17166584+01 | .58105676+00 |
| .32812188+00  | .18280420+01 | .28406956+00 | .17292925+01 | .58869913+00 |
| .32986721+00  | .18281723+01 | .28251162+00 | .17422419+01 | .59650269+00 |
| .33161253+00  | .18283112+01 | .28096246+00 | .17555197+01 | .60447384+00 |
| .333292153+00 | .18284210+01 | .27940596+00 | .17657017+01 | .61056629+00 |
| .33423053+00  | .18285357+01 | .27865377+00 | .17760822+01 | .61675986+00 |
| .33553952+00  | .18286551+01 | .27750562+00 | .17866676+01 | .62305768+00 |
| .33684852+00  | .18287793+01 | .27636124+00 | .17974646+01 | .62946308+00 |
| .33815752+00  | .18289082+01 | .27522037+00 | .18084802+01 | .63597954+00 |
| .33946651+00  | .18290419+01 | .27408273+00 | .18197218+01 | .64261063+00 |
| .34077551+00  | .18291804+01 | .27294806+00 | .18311972+01 | .64936022+00 |
| .34208450+00  | .18293236+01 | .27181609+00 | .18429146+01 | .65623228+00 |
| .34339350+00  | .18294716+01 | .27068654+00 | .18548824+01 | .66323101+00 |
| .34470250+00  | .18296244+01 | .26955815+00 | .18671096+01 | .67036078+00 |
| .34601149+00  | .18297819+01 | .26843363+00 | .18796059+01 | .67762626+00 |
| .34732049+00  | .18299444+01 | .26730969+00 | .18923811+01 | .68503233+00 |
| .34862949+00  | .18301116+01 | .26618705+00 | .19054459+01 | .69258413+00 |
| .34993848+00  | .18302838+01 | .26506542+00 | .19188114+01 | .70028707+00 |
| .35124748+00  | .18304609+01 | .26394451+00 | .19324896+01 | .70814699+00 |
| .35212014+00  | .18305817+01 | .26319748+00 | .19417880+01 | .71347701+00 |
| .35299281+00  | .18307047+01 | .26245054+00 | .19512349+01 | .71888138+00 |
| .35386547+00  | .18308300+01 | .26170360+00 | .19608341+01 | .72436199+00 |
| .35473813+00  | .18309576+01 | .26095655+00 | .19705892+01 | .72992089+00 |
| .35561080+00  | .18310874+01 | .26020931+00 | .19805067+01 | .73556022+00 |
| .35648346+00  | .18312197+01 | .25946179+00 | .19905889+01 | .74128211+00 |
| .35735610+00  | .18313545+01 | .25871389+00 | .20008411+01 | .74708879+00 |
| .35822875+00  | .18314914+01 | .25796548+00 | .20112687+01 | .75298279+00 |
| .35910140+00  | .18316311+01 | .25721648+00 | .20218766+01 | .75896655+00 |

TABLE 134. (Concluded)

$$M_{\infty} = .79999771+01$$

$$\Theta_s = .30543261+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .35997405+00 | .18317730+01 | .25646676+00 | .20326704+01 | .76504270+00 |
| .36084670+00 | .18319173+01 | .25571621+00 | .20434555+01 | .77121392+00 |
| .36171935+00 | .18320641+01 | .25496473+00 | .20548380+01 | .77748302+00 |
| .36259200+00 | .18322134+01 | .25421219+00 | .20662239+01 | .78385301+00 |
| .36346465+00 | .18323651+01 | .25345848+00 | .20778195+01 | .79032680+00 |
| .36433730+00 | .18325195+01 | .25270347+00 | .20896319+01 | .79690786+00 |
| .36477362+00 | .18325976+01 | .25232544+00 | .20956215+01 | .80023957+00 |
| .36520995+00 | .18326764+01 | .25194703+00 | .21016679+01 | .80359939+00 |
| .36564627+00 | .18327558+01 | .25156824+00 | .21077721+01 | .80698769+00 |
| .36608260+00 | .18328359+01 | .25118903+00 | .21139351+01 | .81040504+00 |
| .36651892+00 | .18329167+01 | .25080941+00 | .21201578+01 | .81385177+00 |
| .36695525+00 | .18329981+01 | .25042934+00 | .21264412+01 | .81732847+00 |
| .36739157+00 | .18330802+01 | .25004882+00 | .21327864+01 | .82083558+00 |
| .36782790+00 | .18331631+01 | .24966782+00 | .21391944+01 | .82437363+00 |
| .36826422+00 | .18332466+01 | .24928632+00 | .21456663+01 | .82794310+00 |
| .36870055+00 | .18333308+01 | .24890431+00 | .21522032+01 | .83154453+00 |
| .36913687+00 | .18334157+01 | .24852176+00 | .21588063+01 | .83517852+00 |
| .36957319+00 | .18335013+01 | .24813866+00 | .21654767+01 | .83884553+00 |
| .37000952+00 | .18335876+01 | .24775499+00 | .21722155+01 | .84254615+00 |
| .37044584+00 | .18336746+01 | .24737072+00 | .21790242+01 | .84628108+00 |
| .37088217+00 | .18337624+01 | .24698585+00 | .21859039+01 | .85005079+00 |
| .37131849+00 | .18338510+01 | .24660033+00 | .21928560+01 | .85385597+00 |
| .37175482+00 | .18339402+01 | .24621417+00 | .21998818+01 | .85769726+00 |
| .37219114+00 | .18340302+01 | .24582732+00 | .22069826+01 | .86157530+00 |
| .37262747+00 | .18341210+01 | .24543977+00 | .22141601+01 | .86549079+00 |
| .37306379+00 | .18342126+01 | .24505150+00 | .22214154+01 | .86944436+00 |
| .37350012+00 | .18343049+01 | .24466249+00 | .22287502+01 | .87343677+00 |
| .37393644+00 | .18343980+01 | .24427269+00 | .22361661+01 | .87746873+00 |
| .37437277+00 | .18344919+01 | .24388211+00 | .22436644+01 | .88154098+00 |
| .37480909+00 | .18345867+01 | .24349071+00 | .22512470+01 | .88565433+00 |
| .37524542+00 | .18346727+01 | .24313756+00 | .22581477+01 | .88939372+00 |

$$.80886498+00 = \Delta S/R$$

$$.11664634+02 = P_s/P_{\infty}$$

$$.31593040+01 = \rho_s/\rho_{\infty}$$

$$.36921532+01 = T_s/T_{\infty}$$



TABLE 135. CONICAL FLOWFIELD  $\theta_s = 17.5 \text{ DEG}$ ;  $M_\infty = 10.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .92296917+00 | .99999920+01 | .30543261+00 | .36741930+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .30543261+00 | .18459037+01 | .30543261+00 | .15857974+01 | .50000000+00 |
| .30674161+00 | .18459069+01 | .30412898+00 | .15935757+01 | .50474678+00 |
| .30805060+00 | .18459163+01 | .30283576+00 | .16014859+01 | .50955983+00 |
| .30935960+00 | .18459317+01 | .30155262+00 | .16095311+01 | .51444081+00 |
| .31066860+00 | .18459431+01 | .30027907+00 | .16177152+01 | .51939151+00 |
| .31197759+00 | .18459504+01 | .29901476+00 | .16260419+01 | .52441379+00 |
| .31328659+00 | .18460134+01 | .29775930+00 | .16345151+01 | .52950960+00 |
| .31459558+00 | .18460521+01 | .29651232+00 | .16431390+01 | .53468094+00 |
| .31590458+00 | .18460964+01 | .29527346+00 | .16519178+01 | .53992993+00 |
| .31721358+00 | .18461462+01 | .29404237+00 | .16608561+01 | .54525875+00 |
| .31852257+00 | .18462014+01 | .29281870+00 | .16699584+01 | .55066966+00 |
| .31983157+00 | .18462621+01 | .29160210+00 | .16792296+01 | .55616501+00 |
| .32114056+00 | .18463280+01 | .29039226+00 | .16886748+01 | .56174729+00 |
| .32244956+00 | .18463991+01 | .28918884+00 | .16982993+01 | .56741910+00 |
| .32375856+00 | .18464755+01 | .28799152+00 | .17081087+01 | .57318312+00 |
| .32506755+00 | .18465570+01 | .28679998+00 | .17181087+01 | .57904211+00 |
| .32637655+00 | .18466436+01 | .28561391+00 | .17283056+01 | .58499911+00 |
| .32768555+00 | .18467353+01 | .28443298+00 | .17387055+01 | .59105715+00 |
| .32899454+00 | .18468320+01 | .28325690+00 | .17493152+01 | .59721942+00 |
| .33030354+00 | .18469337+01 | .28208536+00 | .17601417+01 | .60348931+00 |
| .33161253+00 | .18470405+01 | .28091805+00 | .17711925+01 | .60987042+00 |
| .33292153+00 | .18471522+01 | .27975466+00 | .17824750+01 | .61636638+00 |
| .33423053+00 | .18472689+01 | .27859490+00 | .17939976+01 | .62298113+00 |
| .33553952+00 | .18473905+01 | .27743844+00 | .18057686+01 | .62971869+00 |
| .33684852+00 | .18475171+01 | .27628499+00 | .18177971+01 | .63658344+00 |
| .33815752+00 | .18476487+01 | .27513423+00 | .18300928+01 | .64357992+00 |
| .33946652+00 | .18477839+01 | .27403640+00 | .18384431+01 | .64831974+00 |
| .34077551+00 | .18479267+01 | .27360354+00 | .18469195+01 | .65312164+00 |
| .34208451+00 | .18480767+01 | .27283955+00 | .18555254+01 | .65798724+00 |
| .34339350+00 | .18482339+01 | .27207633+00 | .18642640+01 | .66291805+00 |
| .34470250+00 | .18484023+01 | .27131380+00 | .18731388+01 | .66791572+00 |
| .34601149+00 | .18485824+01 | .27055185+00 | .18821534+01 | .67298204+00 |
| .34732049+00 | .18487737+01 | .26979038+00 | .18913116+01 | .67811870+00 |
| .34862949+00 | .18489767+01 | .26902931+00 | .19006171+01 | .68332753+00 |
| .34993849+00 | .18491920+01 | .26826851+00 | .19100740+01 | .68861049+00 |
| .35124749+00 | .18494200+01 | .26750790+00 | .19196866+01 | .69396953+00 |
| .35255649+00 | .18496607+01 | .26674737+00 | .19294693+01 | .69940679+00 |
| .35386549+00 | .18499143+01 | .26598682+00 | .19393965+01 | .70492435+00 |
| .35517449+00 | .18501818+01 | .26522613+00 | .19495031+01 | .71052449+00 |
| .35648349+00 | .18504633+01 | .26446519+00 | .19597842+01 | .71620961+00 |

TABLE 135. (Concluded)

$$M_{\infty} = .99999920+01$$

$$\Theta_s = .30543261+00$$

| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .35124746+00 | .18492428+01 | .26370392+00 | .19702446+01 | .72198199+00 |
| .35212011+00 | .18493680+01 | .26294218+00 | .19808696+01 | .72784414+00 |
| .35299276+00 | .18494955+01 | .26217986+00 | .19917253+01 | .73379890+00 |
| .35386541+00 | .18496256+01 | .26141682+00 | .20027575+01 | .73984900+00 |
| .35473806+00 | .18497581+01 | .26065295+00 | .20139924+01 | .74599732+00 |
| .35561071+00 | .18498932+01 | .25988812+00 | .20254362+01 | .75224684+00 |
| .35648336+00 | .18500308+01 | .25912220+00 | .20370959+01 | .75860078+00 |
| .35735601+00 | .18501710+01 | .25835606+00 | .20489785+01 | .76506247+00 |
| .35822866+00 | .18503137+01 | .25758655+00 | .20610915+01 | .77163532+00 |
| .35910131+00 | .18504592+01 | .25681654+00 | .20734428+01 | .77832310+00 |
| .35997396+00 | .18506073+01 | .25604489+00 | .20860406+01 | .78512960+00 |
| .36084661+00 | .18507582+01 | .25527142+00 | .20988935+01 | .79205883+00 |
| .36171925+00 | .18509119+01 | .25449600+00 | .21120107+01 | .79911505+00 |
| .36259190+00 | .18510683+01 | .25371844+00 | .21254013+01 | .80630259+00 |
| .36346455+00 | .18512277+01 | .25293859+00 | .21390760+01 | .81362630+00 |
| .36433720+00 | .18513901+01 | .25215627+00 | .21530453+01 | .82109110+00 |
| .36520985+00 | .18515554+01 | .25137129+00 | .21673203+01 | .82870216+00 |
| .36608250+00 | .18517238+01 | .25057775+00 | .21745762+01 | .83256424+00 |
| .36695515+00 | .18518953+01 | .24979259+00 | .21819130+01 | .83646502+00 |
| .36782780+00 | .18520700+01 | .24901843+00 | .21893325+01 | .84040522+00 |
| .36870045+00 | .18522479+01 | .24825594+00 | .21968362+01 | .84438557+00 |
| .36957310+00 | .18524290+01 | .24750462+00 | .22044258+01 | .84840688+00 |
| .37044575+00 | .18526133+01 | .24676392+00 | .22121026+01 | .85246843+00 |
| .37131840+00 | .18528008+01 | .24603428+00 | .22200000+01 | .85657040+00 |
| .37219105+00 | .18529915+01 | .24531512+00 | .22280000+01 | .86071280+00 |
| .37306370+00 | .18531854+01 | .24460688+00 | .22360000+01 | .86489560+00 |
| .37393635+00 | .18533825+01 | .24390900+00 | .22440000+01 | .86911880+00 |
| .37480900+00 | .18535828+01 | .24322192+00 | .22520000+01 | .87338240+00 |
| .37568165+00 | .18537863+01 | .24254598+00 | .22600000+01 | .87768640+00 |
| .37655430+00 | .18539930+01 | .24188152+00 | .22680000+01 | .88203080+00 |
| .37742695+00 | .18542030+01 | .24122798+00 | .22760000+01 | .88641560+00 |
| .37829960+00 | .18544163+01 | .24058578+00 | .22840000+01 | .89084080+00 |
| .37917225+00 | .18546329+01 | .23995436+00 | .22920000+01 | .89530640+00 |
| .38004490+00 | .18548528+01 | .23933316+00 | .23000000+01 | .89981240+00 |
| .38091755+00 | .18550760+01 | .23872262+00 | .23080000+01 | .90435880+00 |
| .38179020+00 | .18553025+01 | .23812320+00 | .23160000+01 | .90894560+00 |
| .38266285+00 | .18555324+01 | .23753536+00 | .23240000+01 | .91357280+00 |
| .38353550+00 | .18557657+01 | .23695856+00 | .23320000+01 | .91824040+00 |
| .38440815+00 | .18560024+01 | .23639326+00 | .23400000+01 | .92294840+00 |
| .38528080+00 | .18562425+01 | .23583892+00 | .23480000+01 | .92769680+00 |
| .38615345+00 | .18564860+01 | .23529598+00 | .23560000+01 | .93248560+00 |
| .38702610+00 | .18567330+01 | .23476480+00 | .23640000+01 | .93731480+00 |
| .38789875+00 | .18569834+01 | .23424484+00 | .23720000+01 | .94218440+00 |
| .38877140+00 | .18572373+01 | .23373648+00 | .23800000+01 | .94709440+00 |
| .38964405+00 | .18574947+01 | .23323918+00 | .23880000+01 | .95204480+00 |
| .39051670+00 | .18577556+01 | .23275340+00 | .23960000+01 | .95703560+00 |
| .39138935+00 | .18580199+01 | .23227960+00 | .24040000+01 | .96206680+00 |
| .39226200+00 | .18582877+01 | .23181736+00 | .24120000+01 | .96713840+00 |
| .39313465+00 | .18585590+01 | .23136716+00 | .24200000+01 | .97225040+00 |
| .39400730+00 | .18588338+01 | .23092856+00 | .24280000+01 | .97740280+00 |
| .39487995+00 | .18591121+01 | .23050192+00 | .24360000+01 | .98259560+00 |
| .39575260+00 | .18593940+01 | .23008772+00 | .24440000+01 | .98782880+00 |
| .39662525+00 | .18596794+01 | .22968552+00 | .24520000+01 | .99310240+00 |
| .39749790+00 | .18599684+01 | .22929480+00 | .24600000+01 | .99841640+00 |
| .39837055+00 | .18602609+01 | .22891592+00 | .24680000+01 | .10000000+00 |

$$.12043207+01 = \Delta S/R$$

$$.17492439+02 = P_s/P_{\infty}$$

$$.34393558+01 = \rho_s/\rho_{\infty}$$

$$.50859638+01 = T_s/T_{\infty}$$

/ TABLE 136. CONICAL FLOWFIELD  $\theta_s = 17.5 \text{ DEG}$ ;  $M_\infty = 12.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .92911460+00 | .12500005+02 | .30543261+00 | .36234947+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .30543261+00 | .18581944+01 | .30543261+00 | .15857974+01 | .50000000+00 |
| .30674161+00 | .18581975+01 | .30412897+00 | .15940058+01 | .50488300+00 |
| .30805060+00 | .18582069+01 | .30283574+00 | .16023600+01 | .50983796+00 |
| .30935960+00 | .18582225+01 | .30155248+00 | .16108637+01 | .51486674+00 |
| .31066860+00 | .18582440+01 | .30027876+00 | .16195215+01 | .51997144+00 |
| .31197759+00 | .18582715+01 | .29901416+00 | .16283377+01 | .52515420+00 |
| .31328659+00 | .18583048+01 | .29775827+00 | .16373168+01 | .53041723+00 |
| .31459558+00 | .18583438+01 | .29651069+00 | .16464639+01 | .53576287+00 |
| .31590458+00 | .18583884+01 | .29527105+00 | .16557839+01 | .54119355+00 |
| .31721358+00 | .18584386+01 | .29403896+00 | .16652821+01 | .54671182+00 |
| .31852257+00 | .18584942+01 | .29281404+00 | .16749640+01 | .55232026+00 |
| .31983157+00 | .18585553+01 | .29159695+00 | .16848354+01 | .55802166+00 |
| .32114056+00 | .18586218+01 | .29038431+00 | .16949023+01 | .56381892+00 |
| .32244956+00 | .18586936+01 | .28917878+00 | .17051711+01 | .56971505+00 |
| .32375856+00 | .18587706+01 | .28797901+00 | .17156485+01 | .57571320+00 |
| .32506755+00 | .18588529+01 | .28678465+00 | .17263414+01 | .58181671+00 |
| .32637655+00 | .18589403+01 | .28559536+00 | .17372572+01 | .58802906+00 |
| .32768555+00 | .18590330+01 | .28441081+00 | .17484035+01 | .59433588+00 |
| .32899454+00 | .18591307+01 | .28323065+00 | .17597883+01 | .60079496+00 |
| .33030354+00 | .18592336+01 | .28205455+00 | .17714205+01 | .60735640+00 |
| .33161253+00 | .18593416+01 | .28088218+00 | .17833087+01 | .61404236+00 |
| .33248520+00 | .18594164+01 | .28010249+00 | .17913812+01 | .61857110+00 |
| .33335786+00 | .18594935+01 | .27932421+00 | .17995745+01 | .62315849+00 |
| .33423053+00 | .18595728+01 | .27854724+00 | .18078920+01 | .62780607+00 |
| .33510319+00 | .18596545+01 | .27777147+00 | .18163364+01 | .63251520+00 |
| .33597586+00 | .18597384+01 | .27699680+00 | .18249114+01 | .63728752+00 |
| .33684852+00 | .18598245+01 | .27622313+00 | .18336201+01 | .64212457+00 |
| .33772118+00 | .18599130+01 | .27545035+00 | .18424662+01 | .64702800+00 |
| .33859385+00 | .18600037+01 | .27467837+00 | .18514532+01 | .65199953+00 |
| .33946651+00 | .18600967+01 | .27390708+00 | .18605849+01 | .65704091+00 |
| .34033918+00 | .18601920+01 | .27313636+00 | .18698655+01 | .66215403+00 |
| .34121184+00 | .18602897+01 | .27236611+00 | .18792990+01 | .66734084+00 |
| .34208450+00 | .18603896+01 | .27159623+00 | .18888896+01 | .67260326+00 |
| .34295717+00 | .18604919+01 | .27082661+00 | .18986420+01 | .67794348+00 |
| .34382983+00 | .18605966+01 | .27005712+00 | .19085606+01 | .68336356+00 |
| .34470250+00 | .18607036+01 | .26928766+00 | .19186502+01 | .68886574+00 |
| .34557516+00 | .18608129+01 | .26851811+00 | .19289162+01 | .69445249+00 |
| .34644783+00 | .18609248+01 | .26774835+00 | .19393636+01 | .70012616+00 |
| .34732048+00 | .18610392+01 | .26697827+00 | .19499980+01 | .70588934+00 |
| .34819313+00 | .18611562+01 | .26620774+00 | .19608251+01 | .71174463+00 |

TABLE 136. (Concluded)

$$M_{\infty} = .12500005+02$$

$$\Theta_s = .30543261+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .34906578+00 | .18612757+01 | .26543664+00 | .19718512+01 | .71769499+00 |
| .34950211+00 | .18613364+01 | .26505083+00 | .19774408+01 | .72070669+00 |
| .34993843+00 | .18613977+01 | .26466483+00 | .19830825+01 | .72374324+00 |
| .35037475+00 | .18614596+01 | .26427861+00 | .19887771+01 | .72680505+00 |
| .35081108+00 | .18615222+01 | .26389216+00 | .19945256+01 | .72969249+00 |
| .35124740+00 | .18615854+01 | .26350547+00 | .20003287+01 | .73300596+00 |
| .35168373+00 | .18616492+01 | .26311852+00 | .20061873+01 | .73614586+00 |
| .35212005+00 | .18617137+01 | .26273129+00 | .20121026+01 | .73931269+00 |
| .35255638+00 | .18617789+01 | .26234376+00 | .20180752+01 | .74250679+00 |
| .35299270+00 | .18618447+01 | .26195591+00 | .20241063+01 | .74572868+00 |
| .35342903+00 | .18619112+01 | .26156772+00 | .20301969+01 | .74897884+00 |
| .35386535+00 | .18619783+01 | .26117919+00 | .20363478+01 | .75225762+00 |
| .35430168+00 | .18620461+01 | .26079027+00 | .20425602+01 | .75556559+00 |
| .35473800+00 | .18621145+01 | .26040097+00 | .20488351+01 | .75890318+00 |
| .35517433+00 | .18621837+01 | .26001125+00 | .20551730+01 | .76227102+00 |
| .35561065+00 | .18622536+01 | .25962110+00 | .20615773+01 | .76566949+00 |
| .35604697+00 | .18623241+01 | .25923049+00 | .20680466+01 | .76909917+00 |
| .35648330+00 | .18623953+01 | .25883941+00 | .20745831+01 | .77256063+00 |
| .35691962+00 | .18624672+01 | .25844784+00 | .20811879+01 | .77605440+00 |
| .35735595+00 | .18625399+01 | .25805575+00 | .20878623+01 | .77958105+00 |
| .35779227+00 | .18626132+01 | .25766313+00 | .20946077+01 | .78314117+00 |
| .35822860+00 | .18626873+01 | .25726994+00 | .21014251+01 | .78673536+00 |
| .35866492+00 | .18627621+01 | .25687616+00 | .21083161+01 | .79036423+00 |
| .35910125+00 | .18628376+01 | .25648178+00 | .21152822+01 | .79402854+00 |
| .35953757+00 | .18629139+01 | .25608677+00 | .21223245+01 | .79772871+00 |
| .35997390+00 | .18629909+01 | .25569110+00 | .21294447+01 | .80146559+00 |
| .36041022+00 | .18630687+01 | .25529475+00 | .21366443+01 | .80523983+00 |
| .36084655+00 | .18631473+01 | .25489769+00 | .21439248+01 | .80905212+00 |
| .36128287+00 | .18632266+01 | .25449990+00 | .21512879+01 | .81290326+00 |
| .36171919+00 | .18633067+01 | .25410135+00 | .21587352+01 | .81679394+00 |
| .36215552+00 | .18633876+01 | .25370202+00 | .21662686+01 | .82072499+00 |
| .36234947+00 | .18634238+01 | .25352425+00 | .21696452+01 | .82248551+00 |

$$.16748677+01 = \Delta S/R$$

$$.26594169+02 = P_s/P_{\infty}$$

$$.36634622+01 = \rho_s/\rho_{\infty}$$

$$.72592995+01 = T_s/T_{\infty}$$

TABLE 137. CONICAL FLOWFIELD  $\theta_s = 17.5 \text{ DEG}$ ;  $M_\infty = 15.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .93250632+00 | .14999980+02 | .30543261+00 | .35956438+00 |              |
| $\theta$     | $M^*_1$      | $\psi_1$     | $x$          | $r$          |
| .30543261+00 | .18649777+01 | .30543261+00 | .15857974+01 | .50000000+00 |
| .30674161+00 | .18649809+01 | .30412897+00 | .15942666+01 | .50496560+00 |
| .30805060+00 | .18649903+01 | .30283572+00 | .16028903+01 | .51000669+00 |
| .30935960+00 | .18650059+01 | .30155240+00 | .16116729+01 | .51512536+00 |
| .31066860+00 | .18650276+01 | .30027856+00 | .16206190+01 | .52032381+00 |
| .31197759+00 | .18650552+01 | .29901378+00 | .16297335+01 | .52560437+00 |
| .31328659+00 | .18650886+01 | .29775761+00 | .16390216+01 | .53096951+00 |
| .31459558+00 | .18651277+01 | .29650967+00 | .16484885+01 | .53642169+00 |
| .31590458+00 | .18651725+01 | .29526953+00 | .16581399+01 | .54196361+00 |
| .31721358+00 | .18652229+01 | .29403681+00 | .16679815+01 | .54759803+00 |
| .31852257+00 | .18652748+01 | .29281111+00 | .16780194+01 | .55332778+00 |
| .31983157+00 | .18653402+01 | .29159206+00 | .16882600+01 | .55915569+00 |
| .32114056+00 | .18654070+01 | .29037929+00 | .16987100+01 | .56508556+00 |
| .32244956+00 | .18654791+01 | .28917243+00 | .17093765+01 | .57112010+00 |
| .32375856+00 | .18655565+01 | .28797110+00 | .17202669+01 | .57726298+00 |
| .32506755+00 | .18656393+01 | .28677496+00 | .17313889+01 | .58351782+00 |
| .32637655+00 | .18657272+01 | .28558363+00 | .17427507+01 | .58988851+00 |
| .32768555+00 | .18658204+01 | .28439678+00 | .17543609+01 | .59637904+00 |
| .32899454+00 | .18659187+01 | .28321402+00 | .17662286+01 | .60299367+00 |
| .33030354+00 | .18660223+01 | .28203503+00 | .17783634+01 | .60973689+00 |
| .33161253+00 | .18661310+01 | .28085942+00 | .17907753+01 | .61661334+00 |
| .33248520+00 | .18662064+01 | .28007740+00 | .17992092+01 | .62127414+00 |
| .33335786+00 | .18662840+01 | .27929662+00 | .18077742+01 | .62599789+00 |
| .33423053+00 | .18663640+01 | .27851697+00 | .18164740+01 | .63078624+00 |
| .33510319+00 | .18664463+01 | .27773836+00 | .18253119+01 | .63564079+00 |
| .33597586+00 | .18665308+01 | .27696066+00 | .18342918+01 | .64056331+00 |
| .33684852+00 | .18666177+01 | .27618378+00 | .18434174+01 | .64555554+00 |
| .33772118+00 | .18667069+01 | .27540759+00 | .18526928+01 | .65061934+00 |
| .33859385+00 | .18667985+01 | .27463200+00 | .18621222+01 | .65575667+00 |
| .33946651+00 | .18668924+01 | .27385687+00 | .18717099+01 | .66096954+00 |
| .34033918+00 | .18669886+01 | .27308210+00 | .18814606+01 | .66626006+00 |
| .34121184+00 | .18670872+01 | .27230758+00 | .18913788+01 | .67163038+00 |
| .34208450+00 | .18671882+01 | .27153318+00 | .19014694+01 | .67708272+00 |
| .34295717+00 | .18672917+01 | .27075878+00 | .19117379+01 | .68261960+00 |
| .34382983+00 | .18673975+01 | .26998426+00 | .19221893+01 | .68824335+00 |
| .34470250+00 | .18675057+01 | .26920950+00 | .19328293+01 | .69395657+00 |
| .34557515+00 | .18676168+01 | .26843438+00 | .19436637+01 | .69976188+00 |
| .34644780+00 | .18677303+01 | .26765875+00 | .19546988+01 | .70566224+00 |
| .34732044+00 | .18678464+01 | .26688249+00 | .19659412+01 | .71166059+00 |
| .34819309+00 | .18679650+01 | .26610545+00 | .19773973+01 | .71775996+00 |



TABLE 137. (Concluded)

$$M_{\infty} = .14999980+02$$

$$\Theta_s = .30543261+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .34906574+00 | .18680861+01 | .26532749+00 | .19890743+01 | .72396360+00 |
| .34950207+00 | .18681476+01 | .26493812+00 | .19949981+01 | .72710562+00 |
| .34993839+00 | .18682098+01 | .26454847+00 | .20009797+01 | .73027490+00 |
| .35037472+00 | .18682727+01 | .26415851+00 | .20070205+01 | .73347206+00 |
| .35081104+00 | .18683362+01 | .26376823+00 | .20131212+01 | .73669744+00 |
| .35124737+00 | .18684004+01 | .26337761+00 | .20192831+01 | .73995159+00 |
| .35168369+00 | .18684652+01 | .26298663+00 | .20255072+01 | .74323495+00 |
| .35212002+00 | .18685307+01 | .26259526+00 | .20317945+01 | .74654804+00 |
| .35255634+00 | .18685969+01 | .26220349+00 | .20381460+01 | .74989133+00 |
| .35299267+00 | .18686638+01 | .26181130+00 | .20445633+01 | .75326544+00 |
| .35342899+00 | .18687314+01 | .26141867+00 | .20510471+01 | .75667078+00 |
| .35386531+00 | .18687997+01 | .26102557+00 | .20575989+01 | .76010802+00 |
| .35430164+00 | .18688687+01 | .26063199+00 | .20642198+01 | .76357762+00 |
| .35473796+00 | .18689383+01 | .26023789+00 | .20709113+01 | .76708028+00 |
| .35517429+00 | .18690087+01 | .25984327+00 | .20776744+01 | .77061646+00 |
| .35561061+00 | .18690799+01 | .25944809+00 | .20845106+01 | .77418682+00 |
| .35604694+00 | .18691517+01 | .25905232+00 | .20914213+01 | .77779204+00 |
| .35648326+00 | .18692243+01 | .25865596+00 | .20984080+01 | .78143276+00 |
| .35691959+00 | .18692976+01 | .25825896+00 | .21054718+01 | .78510954+00 |
| .35735591+00 | .18693717+01 | .25786132+00 | .21126147+01 | .78882316+00 |
| .35779224+00 | .18694465+01 | .25746300+00 | .21198380+01 | .79257431+00 |
| .35822856+00 | .18695221+01 | .25706397+00 | .21271435+01 | .79636376+00 |
| .35866489+00 | .18695985+01 | .25666422+00 | .21345325+01 | .80019212+00 |
| .35910121+00 | .18696757+01 | .25626370+00 | .21420069+01 | .80406025+00 |
| .35953753+00 | .18697536+01 | .25586240+00 | .21495684+01 | .80796892+00 |
| .35956438+00 | .18697584+01 | .25583768+00 | .21500366+01 | .80821080+00 |

$$.21044276+01 = \Delta S/R$$

$$.37716260+02 = P_s/P_{\infty}$$

$$.38046156+01 = \rho_s/\rho_{\infty}$$

$$.99132911+01 = T_s/T_{\infty}$$

/ TABLE 138. CONICAL FLOWFIELD  $\theta_s = 17.5 \text{ DEG}$ ;  $M_\infty = 17.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .93457019+00 | .17499994+02 | .30543261+00 | .3578740+00  |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .30543261+00 | .18691053+01 | .30543261+00 | .15857974+01 | .50000000+00 |
| .30674161+00 | .18691085+01 | .30912897+00 | .15944346+01 | .50501882+00 |
| .30805060+00 | .18691180+01 | .30283570+00 | .16032322+01 | .51011548+00 |
| .30935960+00 | .18691336+01 | .30156234+00 | .16121947+01 | .51529214+00 |
| .31066860+00 | .18691553+01 | .30027844+00 | .16213271+01 | .52055117+00 |
| .31197759+00 | .18691829+01 | .29901353+00 | .16306346+01 | .52589498+00 |
| .31328659+00 | .18692164+01 | .29775719+00 | .16401226+01 | .53132619+00 |
| .31459558+00 | .18692557+01 | .29650899+00 | .16497967+01 | .53684738+00 |
| .31590458+00 | .18693006+01 | .29526852+00 | .16596628+01 | .54246140+00 |
| .31721358+00 | .18693511+01 | .29403539+00 | .16697272+01 | .54817114+00 |
| .31852257+00 | .18694072+01 | .29280917+00 | .16799863+01 | .55397967+00 |
| .31983157+00 | .18694687+01 | .29158950+00 | .16904769+01 | .55989015+00 |
| .32114056+00 | .18695357+01 | .29037598+00 | .17011762+01 | .56590597+00 |
| .32244956+00 | .18696081+01 | .28916823+00 | .17121018+01 | .57203066+00 |
| .32375856+00 | .18696858+01 | .28796588+00 | .17232615+01 | .57826786+00 |
| .32506755+00 | .18697688+01 | .28676855+00 | .17346636+01 | .58462150+00 |
| .32637655+00 | .18698570+01 | .28557588+00 | .17463170+01 | .59109566+00 |
| .32768555+00 | .18699505+01 | .28438749+00 | .17582309+01 | .59769461+00 |
| .32899454+00 | .18700493+01 | .28320302+00 | .17704150+01 | .60442292+00 |
| .33030354+00 | .18701533+01 | .28202210+00 | .17828796+01 | .61128531+00 |
| .33161253+00 | .18702625+01 | .28084436+00 | .17956356+01 | .61828686+00 |
| .33292152+00 | .18703782+01 | .28006078+00 | .18043071+01 | .62303448+00 |
| .33335786+00 | .18704162+01 | .27927834+00 | .18131166+01 | .62784791+00 |
| .33423053+00 | .18704965+01 | .27849692+00 | .18220684+01 | .63272896+00 |
| .33510319+00 | .18705792+01 | .27771641+00 | .18311658+01 | .63767933+00 |
| .33597586+00 | .18706642+01 | .27693670+00 | .18404129+01 | .64270090+00 |
| .33684852+00 | .18707516+01 | .27615768+00 | .18498140+01 | .64777956+00 |
| .33772118+00 | .18708413+01 | .27537921+00 | .18593734+01 | .65296540+00 |
| .33859385+00 | .18709334+01 | .27460121+00 | .18690957+01 | .65821245+00 |
| .33946651+00 | .18710279+01 | .27382353+00 | .18789855+01 | .66353883+00 |
| .34033918+00 | .18711247+01 | .27304605+00 | .18890480+01 | .66894693+00 |
| .34121184+00 | .18712240+01 | .27226867+00 | .18992882+01 | .67443903+00 |
| .34208450+00 | .18713256+01 | .27149124+00 | .19097115+01 | .68001759+00 |
| .34295717+00 | .18714298+01 | .27071365+00 | .19203235+01 | .68568524+00 |
| .34382983+00 | .18715365+01 | .26993576+00 | .19311301+01 | .69144459+00 |
| .34470247+00 | .18716459+01 | .26915746+00 | .19421372+01 | .69729840+00 |
| .34557512+00 | .18717579+01 | .26837859+00 | .19533518+01 | .70324977+00 |
| .34644777+00 | .18718723+01 | .26759901+00 | .19647803+01 | .70930169+00 |
| .34732042+00 | .18719893+01 | .26681858+00 | .19764301+01 | .71545748+00 |
| .34819307+00 | .18721089+01 | .26603715+00 | .19883084+01 | .72172043+00 |

TABLE 138. (Concluded)

$$M_{\infty} = .17499994+02$$

$$\Theta_s = .30543261+00$$

| $\underline{\Theta}$ | $\underline{M_1^*}$ | $\underline{\psi_1}$ | $\underline{x}$ | $\underline{r}$ |
|----------------------|---------------------|----------------------|-----------------|-----------------|
| .34906572+00         | .18722312+01        | .26525458+00         | .20004230+01    | .72809413+00    |
| .34950205+00         | .18722933+01        | .26486200+00         | .20065715+01    | .73132366+00    |
| .34993837+00         | .18723561+01        | .26447069+00         | .20127822+01    | .73458227+00    |
| .35037469+00         | .18724195+01        | .26407820+00         | .20190563+01    | .73787052+00    |
| .35081102+00         | .18724837+01        | .26368533+00         | .20253949+01    | .74118889+00    |
| .35124734+00         | .18725485+01        | .26329205+00         | .20317990+01    | .74453788+00    |
| .35168367+00         | .18726140+01        | .26289834+00         | .20382698+01    | .74791799+00    |
| .35211999+00         | .18726802+01        | .26250418+00         | .20448087+01    | .75132985+00    |
| .35255632+00         | .18727471+01        | .26210955+00         | .20514169+01    | .75477401+00    |
| .35299264+00         | .18728147+01        | .26171442+00         | .20580956+01    | .75825101+00    |
| .35342897+00         | .18728830+01        | .26131876+00         | .20648461+01    | .76176144+00    |
| .35386529+00         | .18729520+01        | .26092257+00         | .20716698+01    | .76530595+00    |
| .35430162+00         | .18730218+01        | .26052581+00         | .20785680+01    | .76888512+00    |
| .35473794+00         | .18730923+01        | .26012845+00         | .20855424+01    | .77249969+00    |
| .35517427+00         | .18731634+01        | .25973048+00         | .20925943+01    | .77615026+00    |
| .35561059+00         | .18732355+01        | .25933187+00         | .20997252+01    | .77983748+00    |
| .35604692+00         | .18733083+01        | .25893260+00         | .21069367+01    | .78356212+00    |
| .35648324+00         | .18733817+01        | .25853263+00         | .21142303+01    | .78732485+00    |
| .35691956+00         | .18734560+01        | .25813194+00         | .21216078+01    | .79112641+00    |
| .35735589+00         | .18735311+01        | .25773051+00         | .21290709+01    | .79496764+00    |
| .35779221+00         | .18736069+01        | .25732829+00         | .21366215+01    | .79884934+00    |
| .35822854+00         | .18736832+01        | .25692528+00         | .21442644+01    | .80277142+00    |

$$.24924718+01 = \Delta S/R$$

$$.50859730+02 = P_s/P_{\infty}$$

$$.38976630+01 = \rho_s/\rho_{\infty}$$

$$.13048776+02 = T_s/T_{\infty}$$

TABLE 139. CONICAL FLOWFIELD  $\theta_s = 17.5 \text{ DEG}$ ;  $M_\infty = 20.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .93591746+00 | .19999967+02 | .30543261+00 | .35677233+00 |              |
| $\theta$     | $M^*_1$      | $\psi_1$     | $x$          | $r$          |
| .30543261+00 | .18717998+01 | .30543261+00 | .15857974+01 | .50000000+00 |
| .30630527+00 | .18718013+01 | .30456234+00 | .15916134+01 | .50336121+00 |
| .30717794+00 | .18718055+01 | .30369674+00 | .15975018+01 | .50675739+00 |
| .30805060+00 | .18718125+01 | .30283569+00 | .16034639+01 | .51018921+00 |
| .30892327+00 | .18718223+01 | .30197903+00 | .16095012+01 | .51365732+00 |
| .30979593+00 | .18718348+01 | .30112663+00 | .16156151+01 | .51716243+00 |
| .31066860+00 | .18718499+01 | .30027835+00 | .16218073+01 | .52070532+00 |
| .31154126+00 | .18718677+01 | .29943405+00 | .16280793+01 | .52428671+00 |
| .31241392+00 | .18718881+01 | .29859361+00 | .16344328+01 | .52790737+00 |
| .31328659+00 | .18719111+01 | .29775669+00 | .16408695+01 | .53156813+00 |
| .31415925+00 | .18719367+01 | .29692378+00 | .16473911+01 | .53526980+00 |
| .31503192+00 | .18719648+01 | .29609413+00 | .16539996+01 | .53901324+00 |
| .31590458+00 | .18719954+01 | .29526784+00 | .16606966+01 | .54279927+00 |
| .31677724+00 | .18720285+01 | .29444677+00 | .16674842+01 | .54662889+00 |
| .31764991+00 | .18720641+01 | .29362481+00 | .16743644+01 | .55050296+00 |
| .31852257+00 | .18721022+01 | .29280764+00 | .16813392+01 | .55442249+00 |
| .31939524+00 | .18721427+01 | .29199374+00 | .16884107+01 | .55838842+00 |
| .32026790+00 | .18721856+01 | .29118240+00 | .16955812+01 | .56240180+00 |
| .32114056+00 | .18722307+01 | .29037369+00 | .17028528+01 | .56646369+00 |
| .32201323+00 | .18722787+01 | .28956752+00 | .17102280+01 | .57057517+00 |
| .32288589+00 | .18723288+01 | .28876375+00 | .17177091+01 | .57473739+00 |
| .32375856+00 | .18723813+01 | .28796228+00 | .17252988+01 | .57895151+00 |
| .32463122+00 | .18724362+01 | .28716300+00 | .17329995+01 | .58321872+00 |
| .32550389+00 | .18724934+01 | .28636579+00 | .17408140+01 | .58754031+00 |
| .32637655+00 | .18725529+01 | .28557054+00 | .17487452+01 | .59191754+00 |
| .32724921+00 | .18726148+01 | .28477714+00 | .17567958+01 | .59635178+00 |
| .32812188+00 | .18726791+01 | .28398548+00 | .17649690+01 | .60084441+00 |
| .32899454+00 | .18727457+01 | .28319544+00 | .17732677+01 | .60539684+00 |
| .32986721+00 | .18728146+01 | .28240692+00 | .17816952+01 | .61001058+00 |
| .33073987+00 | .18728859+01 | .28161980+00 | .17902550+01 | .61468720+00 |
| .33161253+00 | .18729594+01 | .28083397+00 | .17989504+01 | .61942825+00 |
| .33248520+00 | .18730354+01 | .28004932+00 | .18077852+01 | .62423546+00 |
| .33335786+00 | .18731136+01 | .27926572+00 | .18167629+01 | .62911050+00 |
| .33423053+00 | .18731943+01 | .27848308+00 | .18258877+01 | .63405524+00 |
| .33510319+00 | .18732772+01 | .27770126+00 | .18351635+01 | .63907150+00 |
| .33597586+00 | .18733625+01 | .27692016+00 | .18445947+01 | .64416125+00 |
| .33684852+00 | .18734502+01 | .27613965+00 | .18541856+01 | .64932650+00 |
| .33772118+00 | .18735403+01 | .27535962+00 | .18639408+01 | .65456935+00 |
| .33859385+00 | .18736327+01 | .27457993+00 | .18738652+01 | .65989203+00 |
| .33946651+00 | .18737275+01 | .27380048+00 | .18839636+01 | .66529678+00 |

TABLE 139. (Concluded)

$$M_{\infty} = .19999967+02$$

$$\Theta_s = .30543261+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .34033918+00 | .18738248+01 | .27302113+00 | .18942415+01 | .67078604+00 |
| .34121184+00 | .18739245+01 | .27224176+00 | .19047042+01 | .67636223+00 |
| .34206450+00 | .18740266+01 | .27146224+00 | .19153574+01 | .68202800+00 |
| .34295717+00 | .18741312+01 | .27068242+00 | .19262073+01 | .68778617+00 |
| .34382982+00 | .18742387+01 | .26990220+00 | .19372599+01 | .69363938+00 |
| .34470247+00 | .18743487+01 | .26912142+00 | .19485220+01 | .69959076+00 |
| .34557512+00 | .18744612+01 | .26833994+00 | .19600004+01 | .70564341+00 |
| .34644777+00 | .18745763+01 | .26755761+00 | .19717023+01 | .71180055+00 |
| .34732042+00 | .18746939+01 | .26677427+00 | .19836353+01 | .71806572+00 |
| .34775674+00 | .18747538+01 | .26638218+00 | .19896909+01 | .72123989+00 |
| .34819306+00 | .18748143+01 | .26598978+00 | .19958073+01 | .72444240+00 |
| .34862939+00 | .18748754+01 | .26559706+00 | .20019856+01 | .72767379+00 |
| .34906571+00 | .18749373+01 | .26520398+00 | .20082269+01 | .73093449+00 |
| .34950204+00 | .18749997+01 | .26481053+00 | .20145321+01 | .73422501+00 |
| .34993836+00 | .18750629+01 | .26441669+00 | .20209026+01 | .73754588+00 |
| .35037469+00 | .18751268+01 | .26402244+00 | .20273395+01 | .74089762+00 |
| .35081101+00 | .18751914+01 | .26362776+00 | .20338441+01 | .74428085+00 |
| .35124734+00 | .18752566+01 | .26323263+00 | .20404174+01 | .74769602+00 |
| .35168366+00 | .18753226+01 | .26283701+00 | .20470609+01 | .75114376+00 |
| .35211999+00 | .18753893+01 | .26244089+00 | .20537757+01 | .75462461+00 |
| .35255631+00 | .18754566+01 | .26204424+00 | .20605634+01 | .75813922+00 |
| .35299264+00 | .18755248+01 | .26164705+00 | .20674252+01 | .76168822+00 |
| .35342896+00 | .18755936+01 | .26124927+00 | .20743625+01 | .76527223+00 |
| .35386528+00 | .18756632+01 | .26085091+00 | .20813768+01 | .76889186+00 |
| .35430161+00 | .18757335+01 | .26045192+00 | .20884697+01 | .77254786+00 |
| .35473793+00 | .18758046+01 | .26005228+00 | .20956426+01 | .77624086+00 |
| .35517426+00 | .18758764+01 | .25965197+00 | .21028974+01 | .77997169+00 |
| .35561058+00 | .18759490+01 | .25925095+00 | .21102353+01 | .78374093+00 |
| .35604691+00 | .18760223+01 | .25884921+00 | .21176584+01 | .78754945+00 |
| .35648323+00 | .18760965+01 | .25844670+00 | .21251682+01 | .79139801+00 |
| .35691956+00 | .18761716+01 | .25804349+00 | .21327648+01 | .79528661+00 |

$$.28431888+01 = \Delta S/R$$

$$.66024217+02 = P_g/P_{\infty}$$

$$.39618200+01 = \rho_g/\rho_{\infty}$$

$$.16665964+02 = T_g/T_{\infty}$$



TABLE 140. CONICAL FLOWFIELD  $\theta_s = 17.5 \text{ DEG}$ ;  $M_\infty = 22.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .93684453+00 | .22499943+02 | .30543261+00 | .35601492+00 |              |
| $\theta$     | $M^*_1$      | $\psi_1$     | $x$          | $r$          |
| .30543261+00 | .18736539+01 | .30543261+00 | .15857974+01 | .50000000+00 |
| .30630527+00 | .18736553+01 | .30456234+00 | .15916666+01 | .50337803+00 |
| .30717794+00 | .18736596+01 | .30369674+00 | .15976095+01 | .50679157+00 |
| .30805060+00 | .18736666+01 | .30283568+00 | .16036274+01 | .51024123+00 |
| .30892327+00 | .18736764+01 | .30197901+00 | .16097218+01 | .51372774+00 |
| .30979593+00 | .18736889+01 | .30112659+00 | .16158943+01 | .51725180+00 |
| .31066860+00 | .18737040+01 | .30027828+00 | .16221463+01 | .52081418+00 |
| .31154126+00 | .18737219+01 | .29943395+00 | .16284796+01 | .52441567+00 |
| .31241392+00 | .18737423+01 | .29859346+00 | .16348961+01 | .52805703+00 |
| .31328659+00 | .18737653+01 | .29775668+00 | .16413972+01 | .53173910+00 |
| .31415925+00 | .18737909+01 | .29692349+00 | .16479850+01 | .53546274+00 |
| .31503192+00 | .18738191+01 | .29609375+00 | .16546610+01 | .53922880+00 |
| .31590458+00 | .18738497+01 | .29526734+00 | .16614275+01 | .54303816+00 |
| .31677724+00 | .18738829+01 | .29444414+00 | .16682862+01 | .54689181+00 |
| .31764991+00 | .18739185+01 | .29362403+00 | .16752393+01 | .55079063+00 |
| .31852257+00 | .18739566+01 | .29280689+00 | .16822890+01 | .55473568+00 |
| .31939524+00 | .18739972+01 | .29199259+00 | .16894372+01 | .55872790+00 |
| .32026790+00 | .18740402+01 | .29118102+00 | .16966864+01 | .56276841+00 |
| .32114056+00 | .18740855+01 | .29037207+00 | .17040390+01 | .56685829+00 |
| .32201323+00 | .18741333+01 | .28956661+00 | .17114972+01 | .57099863+00 |
| .32288589+00 | .18741835+01 | .28876153+00 | .17190637+01 | .57519061+00 |
| .32375856+00 | .18742361+01 | .28795971+00 | .17267410+01 | .57943546+00 |
| .32463122+00 | .18742910+01 | .28716005+00 | .17345317+01 | .58373437+00 |
| .32550389+00 | .18743484+01 | .28636242+00 | .17424388+01 | .58808867+00 |
| .32637655+00 | .18744080+01 | .28556672+00 | .17504651+01 | .59249970+00 |
| .32724921+00 | .18744701+01 | .28477283+00 | .17586136+01 | .59696883+00 |
| .32812188+00 | .18745344+01 | .28398064+00 | .17668873+01 | .60149746+00 |
| .32899454+00 | .18746011+01 | .28319003+00 | .17752894+01 | .60608707+00 |
| .32986721+00 | .18746702+01 | .28240068+00 | .17838235+01 | .61073924+00 |
| .33073987+00 | .18747416+01 | .28161310+00 | .17924929+01 | .61545558+00 |
| .33161253+00 | .18748153+01 | .28082655+00 | .18013012+01 | .62023769+00 |
| .33248520+00 | .18748914+01 | .28004112+00 | .18102522+01 | .62508733+00 |
| .33335786+00 | .18749699+01 | .27925671+00 | .18193497+01 | .63000626+00 |
| .33423053+00 | .18750506+01 | .27847318+00 | .18285981+01 | .63499644+00 |
| .33510319+00 | .18751338+01 | .27769043+00 | .18380012+01 | .64005968+00 |
| .33597586+00 | .18752193+01 | .27690833+00 | .18475636+01 | .64519804+00 |
| .33684852+00 | .18753072+01 | .27612676+00 | .18572899+01 | .65041363+00 |
| .33772118+00 | .18753975+01 | .27534559+00 | .18671849+01 | .65570860+00 |
| .33859385+00 | .18754902+01 | .27456472+00 | .18772537+01 | .66108531+00 |
| .33946651+00 | .18755853+01 | .27378399+00 | .18875012+01 | .66654601+00 |

TABLE 140. (Concluded)

$$M_{\infty} = .22499943+02$$

$$\Theta_s = .30543261+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .34033918+00 | .18756829+01 | .27300330+00 | .18979332+01 | .67209333+00 |
| .34121184+00 | .18757829+01 | .27222250+00 | .19085552+01 | .67772975+00 |
| .34208450+00 | .18758854+01 | .27144146+00 | .19193733+01 | .68345802+00 |
| .34295715+00 | .18759906+01 | .27066008+00 | .19303936+01 | .68928090+00 |
| .34382980+00 | .18760935+01 | .26987818+00 | .19416226+01 | .69520140+00 |
| .34470245+00 | .18762089+01 | .26909562+00 | .19530675+01 | .70122271+00 |
| .34557510+00 | .18763218+01 | .26831226+00 | .19647352+01 | .70734800+00 |
| .34644775+00 | .18764373+01 | .26752795+00 | .19766335+01 | .71358073+00 |
| .34732040+00 | .18765555+01 | .26674252+00 | .19887701+01 | .71992446+00 |
| .34775672+00 | .18766156+01 | .26634934+00 | .19949304+01 | .72313910+00 |
| .34819205+00 | .18766763+01 | .26595582+00 | .20011536+01 | .72638296+00 |
| .34862937+00 | .18767377+01 | .26556195+00 | .20074405+01 | .72965648+00 |
| .34906570+00 | .18767998+01 | .26516769+00 | .20137926+01 | .73296022+00 |
| .34950202+00 | .18768626+01 | .26477304+00 | .20202107+01 | .73629462+00 |
| .34993835+00 | .18769261+01 | .26437796+00 | .20266964+01 | .73966034+00 |
| .35037467+00 | .18769902+01 | .26398244+00 | .20332507+01 | .74305785+00 |
| .35081100+00 | .18770551+01 | .26358645+00 | .20398749+01 | .74648777+00 |
| .35124732+00 | .18771207+01 | .26318997+00 | .20465701+01 | .74995060+00 |
| .35168365+00 | .18771870+01 | .26279297+00 | .20533380+01 | .75344703+00 |
| .35211997+00 | .18772540+01 | .26239544+00 | .20601799+01 | .75697768+00 |
| .35255630+00 | .18773217+01 | .26199734+00 | .20670970+01 | .76054310+00 |
| .35299262+00 | .18773902+01 | .26159866+00 | .20740911+01 | .76414409+00 |
| .35342894+00 | .18774594+01 | .26119936+00 | .20811634+01 | .76778118+00 |
| .35386527+00 | .18775294+01 | .26079943+00 | .20883157+01 | .77145516+00 |
| .35430159+00 | .18776001+01 | .26039883+00 | .20955493+01 | .77516665+00 |
| .35473792+00 | .18776716+01 | .25999754+00 | .21028661+01 | .77891646+00 |
| .35517424+00 | .18777438+01 | .25959552+00 | .21102677+01 | .78270533+00 |
| .35561057+00 | .18778168+01 | .25919276+00 | .21177559+01 | .78653403+00 |
| .35604692+00 | .18778852+01 | .25881882+00 | .21247741+01 | .79011841+00 |

$$.31615853+01 = \Delta S/R$$

$$.83210721+02 = P_s/P_{\infty}$$

$$.40072314+01 = \rho_s/\rho_{\infty}$$

$$.20765140+02 = T_s/T_{\infty}$$

TABLE 141. CONICAL FLOWFIELD  $\theta_s = 17.5$  DEG;  $M_\infty = 25.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .93750946+00 | .24999973+02 | .30543261+00 | .35547207+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .30543261+00 | .18749838+01 | .30543261+00 | .15857974+01 | .50000000+00 |
| .30630527+00 | .18749852+01 | .30454234+00 | .15917055+01 | .50339034+00 |
| .30717794+00 | .18749894+01 | .30369474+00 | .15976882+01 | .50681654+00 |
| .30805060+00 | .18749965+01 | .30283568+00 | .16037469+01 | .51027925+00 |
| .30892327+00 | .18750063+01 | .30197900+00 | .16098830+01 | .51377919+00 |
| .30979593+00 | .18750188+01 | .30112657+00 | .16160982+01 | .51731707+00 |
| .31066860+00 | .18750339+01 | .30027824+00 | .16223941+01 | .52089372+00 |
| .31154126+00 | .18750519+01 | .29943398+00 | .16287723+01 | .52450988+00 |
| .31241392+00 | .18750722+01 | .29859335+00 | .16352346+01 | .52816636+00 |
| .31328659+00 | .18750952+01 | .29775653+00 | .16417828+01 | .53186402+00 |
| .31415925+00 | .18751209+01 | .29692328+00 | .16484188+01 | .53560371+00 |
| .31503192+00 | .18751490+01 | .29609347+00 | .16551444+01 | .53938631+00 |
| .31590458+00 | .18751797+01 | .29526698+00 | .16619615+01 | .54321273+00 |
| .31677724+00 | .18752129+01 | .29444369+00 | .16688724+01 | .54708395+00 |
| .31764991+00 | .18752486+01 | .29362346+00 | .16758788+01 | .55100089+00 |
| .31852257+00 | .18752867+01 | .29280619+00 | .16829832+01 | .55496462+00 |
| .31939524+00 | .18753273+01 | .29199174+00 | .16901877+01 | .55897611+00 |
| .32026790+00 | .18753703+01 | .29118001+00 | .16974948+01 | .56303652+00 |
| .32114056+00 | .18754158+01 | .29037087+00 | .17049065+01 | .56714687+00 |
| .32201323+00 | .18754636+01 | .28956420+00 | .17124256+01 | .57130837+00 |
| .32288589+00 | .18755139+01 | .28875989+00 | .17200546+01 | .57552219+00 |
| .32375856+00 | .18755665+01 | .28795782+00 | .17277962+01 | .57978955+00 |
| .32463122+00 | .18756215+01 | .28715788+00 | .17356530+01 | .58411171+00 |
| .32550389+00 | .18756789+01 | .28635995+00 | .17436279+01 | .58849001+00 |
| .32637655+00 | .18757386+01 | .28556392+00 | .17517240+01 | .59292580+00 |
| .32724921+00 | .18758007+01 | .28476967+00 | .17599442+01 | .59742049+00 |
| .32812188+00 | .18758652+01 | .28397708+00 | .17682917+01 | .60197554+00 |
| .32899454+00 | .18759320+01 | .28318604+00 | .17767699+01 | .60659250+00 |
| .32986721+00 | .18760011+01 | .28239644+00 | .17853822+01 | .61127290+00 |
| .33073987+00 | .18760727+01 | .28160816+00 | .17941322+01 | .61601842+00 |
| .33161253+00 | .18761465+01 | .28082108+00 | .18030234+01 | .62083068+00 |
| .33248520+00 | .18762227+01 | .28003510+00 | .18120599+01 | .62571154+00 |
| .33335784+00 | .18763013+01 | .27925007+00 | .18212455+01 | .63066274+00 |
| .33423053+00 | .18763822+01 | .27846590+00 | .18305847+01 | .63568632+00 |
| .33510319+00 | .18764655+01 | .27768246+00 | .18400815+01 | .64078413+00 |
| .33597586+00 | .18765512+01 | .27689962+00 | .18497407+01 | .64595830+00 |
| .33684852+00 | .18766392+01 | .27611726+00 | .18595667+01 | .65121096+00 |
| .33772118+00 | .18767297+01 | .27533526+00 | .18695648+01 | .65654435+00 |
| .33859385+00 | .18768226+01 | .27455350+00 | .18797399+01 | .66196085+00 |
| .33946651+00 | .18769179+01 | .27377184+00 | .18900974+01 | .66746283+00 |

TABLE 141. (Concluded)

$$M_{\infty} = .24999973+02$$

$$\Theta_s = .30543261+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .34033918+00 | .18770157+01 | .27299015+00 | .19006431+01 | .67305296+00 |
| .34121184+00 | .18771159+01 | .27220830+00 | .19113828+01 | .67873383+00 |
| .34208450+00 | .18772188+01 | .27142616+00 | .19223224+01 | .68450812+00 |
| .34295715+00 | .18773244+01 | .27064359+00 | .19334684+01 | .69037880+00 |
| .34382980+00 | .18774325+01 | .26986045+00 | .19448278+01 | .69634902+00 |
| .34470244+00 | .18775431+01 | .26907657+00 | .19564077+01 | .70242195+00 |
| .34557509+00 | .18776564+01 | .26829182+00 | .19682154+01 | .70860091+00 |
| .34644774+00 | .18777722+01 | .26750604+00 | .19802587+01 | .71488947+00 |
| .34732039+00 | .18778908+01 | .26671907+00 | .19925460+01 | .72129128+00 |
| .34775672+00 | .18779510+01 | .26632509+00 | .19987839+01 | .72453593+00 |
| .34819304+00 | .18780119+01 | .26593074+00 | .20050860+01 | .72781036+00 |
| .34862937+00 | .18780735+01 | .26553602+00 | .20114534+01 | .73111503+00 |
| .34906569+00 | .18781358+01 | .26514089+00 | .20178876+01 | .73445067+00 |
| .34950202+00 | .18781988+01 | .26474534+00 | .20243894+01 | .73781758+00 |
| .34993834+00 | .18782625+01 | .26434935+00 | .20309604+01 | .74121650+00 |
| .35037467+00 | .18783269+01 | .26395287+00 | .20376015+01 | .74464786+00 |
| .35081099+00 | .18783920+01 | .26355591+00 | .20443145+01 | .74811243+00 |
| .35124731+00 | .18784578+01 | .26315843+00 | .20511004+01 | .75161067+00 |
| .35168364+00 | .18785243+01 | .26276042+00 | .20579607+01 | .75514325+00 |
| .35211996+00 | .18785916+01 | .26236183+00 | .20648969+01 | .75871082+00 |
| .35255629+00 | .18786596+01 | .26196265+00 | .20719104+01 | .76231407+00 |
| .35299261+00 | .18787283+01 | .26156286+00 | .20790026+01 | .76595359+00 |
| .35342894+00 | .18787978+01 | .26116243+00 | .20861754+01 | .76963015+00 |
| .35386526+00 | .18788680+01 | .26076133+00 | .20934300+01 | .77334443+00 |
| .35430159+00 | .18789390+01 | .26035953+00 | .21007684+01 | .77709720+00 |
| .35473791+00 | .18790108+01 | .25995701+00 | .21081921+01 | .78088922+00 |
| .35517424+00 | .18790834+01 | .25955373+00 | .21157030+01 | .78472126+00 |
| .35561057+00 | .18791568+01 | .25927801+00 | .21233807+01 | .78873603+00 |

$$.34522787+01 = \Delta S/R$$

$$.10241933+03 = P_s/P_{\infty}$$

$$.40407763+01 = \rho_s/\rho_{\infty}$$

$$.25346449+02 = T_s/T_{\infty}$$

2. TABLE 142. CONICAL FLOWFIELD  $\theta_s = 17.5 \text{ DEG}$ ;  $M_\infty = 27.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .93800245+00 | .27479964+02 | .30543261+00 | .35506987+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .30543261+00 | .18757697+01 | .30543261+00 | .15857974+01 | .50000000+00 |
| .30630527+00 | .18759712+01 | .30456234+00 | .15917348+01 | .50339959+00 |
| .30717794+00 | .18759754+01 | .30369674+00 | .15977474+01 | .50683530+00 |
| .30805060+00 | .18759825+01 | .30283567+00 | .16038366+01 | .51030780+00 |
| .30892327+00 | .18759922+01 | .30197899+00 | .16100041+01 | .51381783+00 |
| .30979593+00 | .18760047+01 | .30112654+00 | .16162514+01 | .51736613+00 |
| .31066860+00 | .18760199+01 | .30027820+00 | .16225802+01 | .52095348+00 |
| .31154126+00 | .18760378+01 | .29943382+00 | .16289922+01 | .52458069+00 |
| .31241392+00 | .18760582+01 | .29859327+00 | .16354891+01 | .52824855+00 |
| .31328659+00 | .18760813+01 | .29775641+00 | .16420728+01 | .53195794+00 |
| .31415925+00 | .18761069+01 | .29692312+00 | .16487451+01 | .53570971+00 |
| .31503192+00 | .18761351+01 | .29609326+00 | .16555079+01 | .53950478+00 |
| .31590458+00 | .18761658+01 | .29526671+00 | .16623633+01 | .54334403+00 |
| .31677724+00 | .18761990+01 | .29444334+00 | .16693133+01 | .54722849+00 |
| .31764991+00 | .18762347+01 | .29362303+00 | .16763601+01 | .55115911+00 |
| .31852257+00 | .18762728+01 | .29280566+00 | .16835058+01 | .55513693+00 |
| .31939524+00 | .18763135+01 | .29199111+00 | .16907527+01 | .55916294+00 |
| .32026790+00 | .18763565+01 | .29117925+00 | .16981031+01 | .56323831+00 |
| .32114056+00 | .18764020+01 | .29036996+00 | .17055596+01 | .56736410+00 |
| .32201323+00 | .18764499+01 | .28956314+00 | .17131245+01 | .57154154+00 |
| .32288589+00 | .18765002+01 | .28875865+00 | .17208006+01 | .57577178+00 |
| .32375856+00 | .18765529+01 | .28795639+00 | .17285905+01 | .58005609+00 |
| .32463122+00 | .18766079+01 | .28715624+00 | .17364971+01 | .58439578+00 |
| .32550389+00 | .18766654+01 | .28635808+00 | .17445232+01 | .58879216+00 |
| .32637655+00 | .18767252+01 | .28556180+00 | .17526718+01 | .59324663+00 |
| .32724921+00 | .18767873+01 | .28476727+00 | .17609462+01 | .59776063+00 |
| .32812188+00 | .18768516+01 | .28397439+00 | .17693494+01 | .60233562+00 |
| .32899454+00 | .18769187+01 | .28318303+00 | .17778849+01 | .60697316+00 |
| .32986721+00 | .18769879+01 | .28239308+00 | .17865562+01 | .61167485+00 |
| .33073987+00 | .18770595+01 | .28160443+00 | .17953670+01 | .61644240+00 |
| .33161253+00 | .18771334+01 | .28081695+00 | .18043209+01 | .62127745+00 |
| .33248520+00 | .18772097+01 | .28003053+00 | .18134219+01 | .62618186+00 |
| .33335786+00 | .18772884+01 | .27924605+00 | .18226742+01 | .63115745+00 |
| .33423053+00 | .18773694+01 | .27846339+00 | .18320819+01 | .63620622+00 |
| .33510319+00 | .18774526+01 | .27767691+00 | .18416496+01 | .64133018+00 |
| .33597586+00 | .18775386+01 | .27689302+00 | .18513817+01 | .64653137+00 |
| .33684852+00 | .18776268+01 | .27611007+00 | .18612832+01 | .65181205+00 |
| .33772118+00 | .18777174+01 | .27532744+00 | .18713591+01 | .65717448+00 |
| .33859385+00 | .18778104+01 | .27454501+00 | .18816147+01 | .66262108+00 |
| .33946651+00 | .18779059+01 | .27376264+00 | .18920554+01 | .66815428+00 |



TABLE 142. (Concluded)

$$M_{\infty} = .27499964+02$$

$$\Theta_s = .30543261+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .34033918+00 | .18780038+01 | .27298019+00 | .19026871+01 | .67377679+00 |
| .34121184+00 | .18781042+01 | .27219754+00 | .19135158+01 | .67949124+00 |
| .34208450+00 | .18782073+01 | .27141456+00 | .19245475+01 | .68530047+00 |
| .34295715+00 | .18783130+01 | .27063110+00 | .19357890+01 | .69120741+00 |
| .34382980+00 | .18784213+01 | .26984701+00 | .19472472+01 | .69721528+00 |
| .34470244+00 | .18785322+01 | .26906214+00 | .19589295+01 | .70332737+00 |
| .34557509+00 | .18786457+01 | .26827634+00 | .19708434+01 | .70954707+00 |
| .34644774+00 | .18787618+01 | .26748944+00 | .19829969+01 | .71587797+00 |
| .34732039+00 | .18788806+01 | .26670130+00 | .19953986+01 | .72232390+00 |
| .34775672+00 | .18789410+01 | .26630670+00 | .20016953+01 | .72559128+00 |
| .34819304+00 | .18790026+01 | .26591173+00 | .20080573+01 | .72888888+00 |
| .34862937+00 | .18790638+01 | .26551636+00 | .20144858+01 | .73221724+00 |
| .34906569+00 | .18791263+01 | .26512057+00 | .20209823+01 | .73557702+00 |
| .34950202+00 | .18791894+01 | .26472434+00 | .20275476+01 | .73896863+00 |
| .34993834+00 | .18792533+01 | .26432764+00 | .20341833+01 | .74239274+00 |
| .35037467+00 | .18793178+01 | .26393046+00 | .20408906+01 | .74584986+00 |
| .35081099+00 | .18793831+01 | .26353276+00 | .20476710+01 | .74934072+00 |
| .35124731+00 | .18794491+01 | .26313452+00 | .20545258+01 | .75286587+00 |
| .35168364+00 | .18795158+01 | .26273573+00 | .20614565+01 | .75642598+00 |
| .35211996+00 | .18795833+01 | .26233635+00 | .20684643+01 | .76002163+00 |
| .35255629+00 | .18796514+01 | .26193636+00 | .20755512+01 | .76365361+00 |
| .35299261+00 | .18797204+01 | .26153572+00 | .20827181+01 | .76732245+00 |
| .35342894+00 | .18797891+01 | .26113442+00 | .20899671+01 | .77102900+00 |
| .35386526+00 | .18798605+01 | .26073243+00 | .20972998+01 | .77477398+00 |
| .35430159+00 | .18799317+01 | .26032972+00 | .21047179+01 | .77855819+00 |
| .35473791+00 | .18800037+01 | .25992626+00 | .21122231+01 | .78238235+00 |
| .35506987+00 | .18800590+01 | .25961879+00 | .21179924+01 | .78531897+00 |

$$.37192044+01 = \Delta S/R$$

$$.12364908+03 = P_s/P_{\infty}$$

$$.40661001+01 = \rho_s/\rho_{\infty}$$

$$.30409748+02 = T_s/T_{\infty}$$

TABLE 143. CONICAL FLOWFIELD  $\theta_s = 17.5$  DEG;  $M_\infty = 30.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .93837790+00 | .30000048+02 | .30543261+00 | .35476362+00 |              |
| $\theta$     | $M^*_1$      | $\psi_1$     | $x$          | $r$          |
| .30543261+00 | .18767206+01 | .30543261+00 | .15857974+01 | .50000000+00 |
| .30630527+00 | .18767221+01 | .30456234+00 | .15917573+01 | .50340670+00 |
| .30717794+00 | .18767263+01 | .30369674+00 | .15977928+01 | .50684972+00 |
| .30805060+00 | .18767333+01 | .30283567+00 | .16039057+01 | .51032977+00 |
| .30892327+00 | .18767431+01 | .30197898+00 | .16100973+01 | .51384756+00 |
| .30979593+00 | .18767557+01 | .30112653+00 | .16163693+01 | .51740387+00 |
| .31066860+00 | .18767708+01 | .30027818+00 | .16227235+01 | .52099948+00 |
| .31154126+00 | .18767887+01 | .29943378+00 | .16291614+01 | .52463517+00 |
| .31241392+00 | .18768091+01 | .29859320+00 | .16356849+01 | .52831178+00 |
| .31328659+00 | .18768322+01 | .29775632+00 | .16422958+01 | .53203019+00 |
| .31415925+00 | .18768579+01 | .29692299+00 | .16489961+01 | .53579127+00 |
| .31503192+00 | .18768861+01 | .29609310+00 | .16557876+01 | .53959592+00 |
| .31590458+00 | .18769168+01 | .29526649+00 | .16626724+01 | .54344507+00 |
| .31677724+00 | .18769500+01 | .29444307+00 | .16696526+01 | .54733972+00 |
| .31764991+00 | .18769857+01 | .29362270+00 | .16767303+01 | .55128084+00 |
| .31852257+00 | .18770239+01 | .29280525+00 | .16839078+01 | .55526949+00 |
| .31939524+00 | .18770645+01 | .29199061+00 | .16911872+01 | .55930667+00 |
| .32026790+00 | .18771076+01 | .29117865+00 | .16985712+01 | .56339356+00 |
| .32114056+00 | .18771531+01 | .29036926+00 | .17060621+01 | .56753127+00 |
| .32201323+00 | .18772010+01 | .28956232+00 | .17136623+01 | .57172097+00 |
| .32288589+00 | .18772513+01 | .28875770+00 | .17213747+01 | .57596388+00 |
| .32375856+00 | .18773040+01 | .28795529+00 | .17292020+01 | .58026129+00 |
| .32463122+00 | .18773591+01 | .28715498+00 | .17371469+01 | .58461449+00 |
| .32550389+00 | .18774166+01 | .28635664+00 | .17452125+01 | .58902482+00 |
| .32637655+00 | .18774764+01 | .28556016+00 | .17534017+01 | .59349369+00 |
| .32724921+00 | .18775386+01 | .28476542+00 | .17617178+01 | .59802257+00 |
| .32812188+00 | .18776032+01 | .28397230+00 | .17701640+01 | .60261294+00 |
| .32899454+00 | .18776701+01 | .28318070+00 | .17787437+01 | .60726636+00 |
| .32986721+00 | .18777394+01 | .28239049+00 | .17874606+01 | .61198449+00 |
| .33073987+00 | .18778110+01 | .28160154+00 | .17963183+01 | .61676902+00 |
| .33161253+00 | .18778850+01 | .28081376+00 | .18053205+01 | .62162165+00 |
| .33248520+00 | .18779614+01 | .28002701+00 | .18144713+01 | .62654422+00 |
| .33335786+00 | .18780401+01 | .27924117+00 | .18237749+01 | .63153864+00 |
| .33423053+00 | .18781212+01 | .27845613+00 | .18332357+01 | .63660690+00 |
| .33510319+00 | .18782047+01 | .27767175+00 | .18428580+01 | .64175100+00 |
| .33597586+00 | .18782906+01 | .27688792+00 | .18526466+01 | .64697310+00 |
| .33684852+00 | .18783789+01 | .27610452+00 | .18626064+01 | .65227544+00 |
| .33772116+00 | .18784696+01 | .27532140+00 | .18727425+01 | .65766030+00 |
| .33859385+00 | .18785627+01 | .27453845+00 | .18830603+01 | .66313015+00 |
| .33946651+00 | .18786583+01 | .27375552+00 | .18935653+01 | .66868749+00 |

TABLE 143. (Concluded)

$$M_{\infty} = .30000046+02$$

$$\Theta_s = .30543261+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .34033918+00 | .18787564+01 | .27297250+00 | .19042636+01 | .67433503+00 |
| .34121184+00 | .18788569+01 | .27218923+00 | .19151610+01 | .68007547+00 |
| .34208449+00 | .18789603+01 | .27140560+00 | .19262639+01 | .68591163+00 |
| .34295714+00 | .18790662+01 | .27062145+00 | .19375791+01 | .69184660+00 |
| .34382979+00 | .18791746+01 | .26983663+00 | .19491139+01 | .69788364+00 |
| .34470244+00 | .18792857+01 | .26905098+00 | .19608755+01 | .70402604+00 |
| .34557509+00 | .18793994+01 | .26826436+00 | .19728717+01 | .71027728+00 |
| .34644774+00 | .18795156+01 | .26747660+00 | .19851106+01 | .71664099+00 |
| .34732039+00 | .18796346+01 | .26668753+00 | .19976008+01 | .72312109+00 |
| .34775671+00 | .18796951+01 | .26629247+00 | .20039430+01 | .72640604+00 |
| .34819303+00 | .18797563+01 | .26589701+00 | .20103515+01 | .72972162+00 |
| .34862936+00 | .18798182+01 | .26550113+00 | .20168275+01 | .73306837+00 |
| .34906568+00 | .18798807+01 | .26510483+00 | .20233722+01 | .73644686+00 |
| .34950201+00 | .18799440+01 | .26470807+00 | .20299868+01 | .73985761+00 |
| .34993833+00 | .18800080+01 | .26431083+00 | .20366727+01 | .74330123+00 |
| .35037466+00 | .18800727+01 | .26391309+00 | .20434313+01 | .74677838+00 |
| .35081098+00 | .18801381+01 | .26351482+00 | .20502641+01 | .75028965+00 |
| .35124731+00 | .18802042+01 | .26311599+00 | .20571722+01 | .75383560+00 |
| .35168363+00 | .18802711+01 | .26271660+00 | .20641573+01 | .75741702+00 |
| .35211996+00 | .18803387+01 | .26231660+00 | .20712209+01 | .76103447+00 |
| .35255628+00 | .18804070+01 | .26191597+00 | .20783646+01 | .76468872+00 |
| .35299261+00 | .18804761+01 | .26151468+00 | .20855896+01 | .76838036+00 |
| .35342893+00 | .18805459+01 | .26111272+00 | .20928978+01 | .77211019+00 |
| .35386525+00 | .18806166+01 | .26071003+00 | .21002912+01 | .77587903+00 |
| .35430158+00 | .18806880+01 | .26030662+00 | .21077711+01 | .77968757+00 |
| .35473790+00 | .18807601+01 | .25990243+00 | .21153395+01 | .78353664+00 |
| .35476362+00 | .18807644+01 | .25987858+00 | .21157882+01 | .78376471+00 |

$$.39656659+01 = \Delta S/R$$

$$.14690190+03 = P_s/P_{\infty}$$

$$.40856676+01 = \rho_s/\rho_{\infty}$$

$$.35955420+02 = T_s/T_{\infty}$$

TABLE 144. CONICAL FLOWFIELD  $\theta_s = 20.0$  DEG;  $M_\infty = 1.3913074$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .50000938+00 | .13913074+01 | .34906584+00 | .95786928+00 |              |
| $\theta$     | $M^*_1$      | $\psi_1$     | $x$          | $r$          |
| .34906584+00 | .10000000+01 | .34906584+00 | .13737387+01 | .50000000+00 |
| .36651912+00 | .10002821+01 | .33240800+00 | .13655437+01 | .52418306+00 |
| .38397241+00 | .10010492+01 | .31719109+00 | .13583457+01 | .54880723+00 |
| .40142569+00 | .10022047+01 | .30322073+00 | .13520622+01 | .57391629+00 |
| .41887897+00 | .10036748+01 | .29033416+00 | .13466291+01 | .59955782+00 |
| .43633226+00 | .10054627+01 | .27840301+00 | .13419973+01 | .62578351+00 |
| .45378554+00 | .10073438+01 | .26730799+00 | .13381305+01 | .65264975+00 |
| .46949349+00 | .10092443+01 | .25795919+00 | .13352836+01 | .67742793+00 |
| .48520145+00 | .10112693+01 | .24915053+00 | .13330235+01 | .70282345+00 |
| .50090940+00 | .10134025+01 | .24082913+00 | .13313442+01 | .72888946+00 |
| .51661722+00 | .10156310+01 | .23294833+00 | .13302442+01 | .75568344+00 |
| .53232504+00 | .10179443+01 | .22546712+00 | .13297281+01 | .78326903+00 |
| .54803286+00 | .10203341+01 | .21834495+00 | .13298039+01 | .81171476+00 |
| .56199536+00 | .10225173+01 | .21230007+00 | .13303817+01 | .83778484+00 |
| .57595787+00 | .10247523+01 | .20649166+00 | .13314539+01 | .86465479+00 |
| .58992038+00 | .10270364+01 | .20090488+00 | .13330379+01 | .89238930+00 |
| .60388289+00 | .10293674+01 | .19552264+00 | .13351554+01 | .92105997+00 |
| .61784539+00 | .10317443+01 | .19032911+00 | .13378326+01 | .95074580+00 |
| .63180790+00 | .10341661+01 | .18530983+00 | .13411003+01 | .98153439+00 |
| .64402509+00 | .10363220+01 | .18105029+00 | .13444725+01 | .10094555+01 |
| .65624229+00 | .10385125+01 | .17690542+00 | .13483529+01 | .10383683+01 |
| .66845948+00 | .10407380+01 | .17286728+00 | .13527739+01 | .10683529+01 |
| .68067668+00 | .10429995+01 | .16892845+00 | .13577724+01 | .10994985+01 |
| .69289387+00 | .10452981+01 | .16508177+00 | .13633909+01 | .11319047+01 |
| .70511106+00 | .10476351+01 | .16132036+00 | .13696778+01 | .11656825+01 |
| .71558294+00 | .10496703+01 | .15815923+00 | .13756406+01 | .11958211+01 |
| .72605482+00 | .10517364+01 | .15505195+00 | .13821753+01 | .12271474+01 |
| .73652671+00 | .10538350+01 | .15199458+00 | .13893271+01 | .12597592+01 |
| .74699859+00 | .10559678+01 | .14898333+00 | .13971468+01 | .12937661+01 |
| .75747047+00 | .10581367+01 | .14601436+00 | .14056930+01 | .13292913+01 |
| .76794235+00 | .10603442+01 | .14308892+00 | .14150321+01 | .13664737+01 |
| .77666891+00 | .10622149+01 | .14066854+00 | .14234749+01 | .13988376+01 |
| .78539548+00 | .10641158+01 | .13827498+00 | .14325707+01 | .14325630+01 |
| .79412205+00 | .10660486+01 | .13590102+00 | .14423765+01 | .14677648+01 |
| .80284861+00 | .10680155+01 | .13354430+00 | .14529559+01 | .15045713+01 |
| .81157518+00 | .10700188+01 | .13120242+00 | .14643818+01 | .15431274+01 |
| .82030175+00 | .10720610+01 | .12887284+00 | .14767374+01 | .15835975+01 |
| .82728300+00 | .10737247+01 | .12701624+00 | .14873550+01 | .16174764+01 |
| .83426426+00 | .10754169+01 | .12516440+00 | .14986839+01 | .16528077+01 |
| .84124551+00 | .10771392+01 | .12331581+00 | .15107872+01 | .16897127+01 |

TABLE 144. (Concluded)

$$M_{\infty} = .13913074+01$$

$$\Theta_s = .34906584+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .84822676+00 | .10788939+01 | .12146883+00 | .15237354+01 | .17283272+01 |
| .85520802+00 | .10606829+01 | .11962178+00 | .15376092+01 | .17688052+01 |
| .86218927+00 | .10825091+01 | .11777280+00 | .15525006+01 | .18113211+01 |
| .86742521+00 | .10839046+01 | .11638357+00 | .15643999+01 | .18446642+01 |
| .87266115+00 | .10853238+01 | .11499120+00 | .15749811+01 | .18793596+01 |
| .87789709+00 | .10867683+01 | .11359469+00 | .15903006+01 | .19155126+01 |
| .88313303+00 | .10882394+01 | .11219296+00 | .16044217+01 | .19532408+01 |
| .88836897+00 | .10897390+01 | .11078487+00 | .16194159+01 | .19926761+01 |
| .89360491+00 | .10912692+01 | .10936491+00 | .16353638+01 | .20339670+01 |
| .89709554+00 | .10923072+01 | .10842035+00 | .16465705+01 | .20626075+01 |
| .90058617+00 | .10933605+01 | .10746708+00 | .16582719+01 | .20922025+01 |
| .90407679+00 | .10944298+01 | .10650886+00 | .16705016+01 | .21228125+01 |
| .90756742+00 | .10955159+01 | .10554914+00 | .16832961+01 | .21545039+01 |
| .91105805+00 | .10966177+01 | .10457537+00 | .16966957+01 | .21873496+01 |
| .91454867+00 | .10977422+01 | .10359894+00 | .17107452+01 | .22214301+01 |
| .91803930+00 | .10988845+01 | .10261518+00 | .17254941+01 | .22568343+01 |
| .92152915+00 | .11000477+01 | .10162351+00 | .17409939+01 | .22936524+01 |
| .92501900+00 | .11012332+01 | .10062294+00 | .17573099+01 | .23320022+01 |
| .92850886+00 | .11024423+01 | .99612631-01 | .17745108+01 | .23720064+01 |
| .93199871+00 | .11036768+01 | .98591618-01 | .17926749+01 | .24138029+01 |
| .93548856+00 | .11049384+01 | .97558789-01 | .18118902+01 | .24575473+01 |
| .93897841+00 | .11062289+01 | .96512951-01 | .18322574+01 | .25034164+01 |
| .94246826+00 | .11075509+01 | .95452763-01 | .18538917+01 | .25516119+01 |
| .94595812+00 | .11089066+01 | .94376653-01 | .18769256+01 | .26023648+01 |
| .94944797+00 | .11102991+01 | .93282878-01 | .19015128+01 | .26559424+01 |
| .95293782+00 | .11117317+01 | .92169441-01 | .19278335+01 | .27126566+01 |
| .95642767+00 | .11132082+01 | .91034003-01 | .19560998+01 | .27728731+01 |
| .95786928+00 | .11138320+01 | .90557925-01 | .19684016+01 | .27988688+01 |

$$.24662279-02 = \Delta S/R$$

$$.16871730+01 = P_s/P_{\infty}$$

$$.13673025+01 = \rho_s/\rho_{\infty}$$

$$.12339428+01 = T_s/T_{\infty}$$



TABLE 145. CONICAL FLOWFIELD  $\theta_s = 20.0$  DEG;  $M_\infty = 1.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .53475761+00 | .14999883+01 | .34906584+00 | .87478556+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .34906584+00 | .10694952+01 | .34906584+00 | .13737387+01 | .50000000+00 |
| .36477380+00 | .10697415+01 | .33480447+00 | .13757893+01 | .52536282+00 |
| .38048175+00 | .10704176+01 | .32012225+00 | .13782980+01 | .55127984+00 |
| .39618970+00 | .10714458+01 | .30727010+00 | .13812906+01 | .57780632+00 |
| .41189766+00 | .10727656+01 | .29532312+00 | .13847940+01 | .60500156+00 |
| .42760561+00 | .10743295+01 | .28417576+00 | .13888372+01 | .63292950+00 |
| .44200457+00 | .10759452+01 | .27458265+00 | .13930444+01 | .65923277+00 |
| .45640353+00 | .10777109+01 | .26552576+00 | .13977583+01 | .68626776+00 |
| .47080249+00 | .10796060+01 | .25695265+00 | .14030084+01 | .71409742+00 |
| .48520145+00 | .10816210+01 | .24881710+00 | .14088279+01 | .74279053+00 |
| .49960041+00 | .10837375+01 | .24107840+00 | .14152535+01 | .77242238+00 |
| .51269026+00 | .10857430+01 | .23435667+00 | .14216561+01 | .80024461+00 |
| .52578011+00 | .10878198+01 | .22790822+00 | .14286292+01 | .82897981+00 |
| .53886996+00 | .10899630+01 | .22171079+00 | .14362122+01 | .85870347+00 |
| .55195981+00 | .10921688+01 | .21574409+00 | .14444494+01 | .88949909+00 |
| .56504966+00 | .10944343+01 | .20998953+00 | .14533904+01 | .92145887+00 |
| .57803053+00 | .10968226+01 | .20497270+00 | .14620856+01 | .95130287+00 |
| .58861139+00 | .10986567+01 | .20011231+00 | .14714428+01 | .98225634+00 |
| .60039226+00 | .11006360+01 | .19538264+00 | .14815139+01 | .10144116+01 |
| .61217313+00 | .11030606+01 | .19077851+00 | .14923575+01 | .10478714+01 |
| .62395399+00 | .11053307+01 | .18629033+00 | .15040398+01 | .10827509+01 |
| .63442587+00 | .11073874+01 | .18239073+00 | .15151088+01 | .11150508+01 |
| .64489775+00 | .11094817+01 | .17866947+00 | .15271194+01 | .11486756+01 |
| .65536963+00 | .11116145+01 | .17482062+00 | .15398991+01 | .11837389+01 |
| .66584151+00 | .11137875+01 | .17113841+00 | .15536037+01 | .12203677+01 |
| .67631339+00 | .11160022+01 | .16751723+00 | .15683199+01 | .12587054+01 |
| .68674629+00 | .11179761+01 | .16439435+00 | .15821035+01 | .12937796+01 |
| .69463918+00 | .11199852+01 | .16131026+00 | .15968121+01 | .13304087+01 |
| .70380208+00 | .11220314+01 | .15826123+00 | .16125305+01 | .13687300+01 |
| .71296497+00 | .11241170+01 | .15524355+00 | .16293554+01 | .14088993+01 |
| .72212787+00 | .11262442+01 | .15225337+00 | .16473973+01 | .14510929+01 |
| .72998178+00 | .11281029+01 | .14970930+00 | .16639258+01 | .14890217+01 |
| .73783569+00 | .11299962+01 | .14718001+00 | .16815324+01 | .15287291+01 |
| .74568960+00 | .11319266+01 | .14466289+00 | .17003204+01 | .15703774+01 |
| .75354351+00 | .11338964+01 | .14215504+00 | .17204083+01 | .16144151+01 |
| .76139742+00 | .11359084+01 | .13965362+00 | .17419317+01 | .16602608+01 |
| .76794235+00 | .11376198+01 | .13757167+00 | .17610769+01 | .17006436+01 |
| .77448727+00 | .11393649+01 | .13549000+00 | .17814316+01 | .17429756+01 |
| .78103220+00 | .11411460+01 | .13340687+00 | .18031139+01 | .17874376+01 |
| .78757712+00 | .11429659+01 | .13131883+00 | .18262599+01 | .18342360+01 |

TABLE 145. (Concluded)

$$M_{\infty} = .1699883+01$$

$$\Theta_s = .34906584+00$$

| $\Theta$     | $M^*_1$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .79412205+00 | .11448274+01 | .12922456+00 | .18510257+01 | .18836070+01 |
| .79935799+00 | .11463469+01 | .12754251+00 | .18721254+01 | .19251379+01 |
| .80459393+00 | .11479011+01 | .12585292+00 | .18944834+01 | .19686482+01 |
| .80982987+00 | .11494863+01 | .12415410+00 | .19182206+01 | .20143184+01 |
| .81506581+00 | .11511069+01 | .12244416+00 | .19434754+01 | .20623638+01 |
| .82030175+00 | .11527656+01 | .12072106+00 | .19704065+01 | .21129895+01 |
| .82422870+00 | .11540366+01 | .11941669+00 | .19918145+01 | .21528344+01 |
| .82815537+00 | .11553321+01 | .11810657+00 | .20143551+01 | .21944203+01 |
| .83208145+00 | .11566541+01 | .11678353+00 | .20381259+01 | .22378894+01 |
| .83600754+00 | .11580041+01 | .11544818+00 | .20632429+01 | .22834124+01 |
| .83993362+00 | .11593842+01 | .11409905+00 | .20898342+01 | .23311752+01 |
| .84255101+00 | .11603221+01 | .11319118+00 | .21084524+01 | .23643653+01 |
| .84516840+00 | .11612752+01 | .11227596+00 | .21278391+01 | .23987149+01 |
| .84778579+00 | .11622441+01 | .11135275+00 | .21480479+01 | .24343012+01 |
| .85040317+00 | .11632300+01 | .11042098+00 | .21691380+01 | .24712094+01 |
| .85302056+00 | .11642336+01 | .10947993+00 | .21911750+01 | .25095336+01 |
| .85563795+00 | .11652560+01 | .10852888+00 | .22142317+01 | .25493779+01 |
| .85825534+00 | .11662985+01 | .10756698+00 | .22383894+01 | .25908586+01 |
| .86087273+00 | .11673623+01 | .10659230+00 | .22637393+01 | .26341055+01 |
| .86349012+00 | .11684489+01 | .10560686+00 | .22903840+01 | .26792643+01 |
| .86610751+00 | .11695597+01 | .10460642+00 | .23184396+01 | .27264998+01 |
| .86872490+00 | .11706968+01 | .10359100+00 | .23480376+01 | .27759977+01 |
| .87134229+00 | .11718620+01 | .10255887+00 | .23793292+01 | .28279713+01 |
| .87395968+00 | .11730577+01 | .10150856+00 | .24124878+01 | .28826643+01 |
| .87478556+00 | .11734417+01 | .10117308+00 | .24233695+01 | .29005306+01 |

$$.31539425+02 = \Delta S/R$$

$$.17399299+01 = P_s/P_{\infty}$$

$$.13924136+01 = \rho_s/\rho_{\infty}$$

$$.12495784+01 = T_s/T_{\infty}$$

14 TABLE 146. CONICAL FLOWFIELD  $\theta_s = 20.0$  DEG;  $M_\infty = 2.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .64826161+00 | .19999945+01 | .34906584+00 | .67538059+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .34906584+00 | .12964989+01 | .34906584+00 | .13737387+01 | .50000000+00 |
| .35910148+00 | .12966239+01 | .33929737+00 | .13839245+01 | .51949393+00 |
| .36913712+00 | .12969778+01 | .33002768+00 | .13946568+01 | .53955198+00 |
| .37917275+00 | .12975333+01 | .32120863+00 | .14059686+01 | .56021357+00 |
| .38920839+00 | .12982676+01 | .31279784+00 | .14178961+01 | .58152150+00 |
| .39924403+00 | .12991617+01 | .30475822+00 | .14304794+01 | .60352270+00 |
| .40840700+00 | .13001042+01 | .29771359+00 | .14425791+01 | .62425963+00 |
| .41756998+00 | .13011563+01 | .29092796+00 | .14553001+01 | .64565999+00 |
| .42673295+00 | .13023095+01 | .28438080+00 | .14686842+01 | .66777059+00 |
| .43589592+00 | .13035563+01 | .27805335+00 | .14827769+01 | .69064261+00 |
| .44505390+00 | .13048904+01 | .27192846+00 | .14976293+01 | .71433242+00 |
| .45333492+00 | .13061683+01 | .26654821+00 | .15117687+01 | .73652237+00 |
| .46163952+00 | .13075103+01 | .26130991+00 | .15266226+01 | .75948314+00 |
| .46992983+00 | .13089134+01 | .25620339+00 | .15422424+01 | .78327037+00 |
| .47822013+00 | .13103757+01 | .25121912+00 | .15586846+01 | .80794518+00 |
| .48651044+00 | .13118953+01 | .24634794+00 | .15760128+01 | .83357543+00 |
| .49392809+00 | .13133026+01 | .24207841+00 | .15923257+01 | .85737888+00 |
| .50134572+00 | .13147541+01 | .23788661+00 | .16094605+01 | .88206665+00 |
| .50876331+00 | .13162496+01 | .23376608+00 | .16274795+01 | .90770423+00 |
| .51618089+00 | .13177889+01 | .22971373+00 | .16464524+01 | .93436461+00 |
| .52359847+00 | .13193721+01 | .22572174+00 | .16664567+01 | .96212854+00 |
| .53014340+00 | .13208061+01 | .22224596+00 | .16850331+01 | .98761414+00 |
| .53668832+00 | .13222751+01 | .21881010+00 | .17045466+01 | .10140977+01 |
| .54323325+00 | .13237799+01 | .21541053+00 | .17250713+01 | .10416553+01 |
| .54977817+00 | .13253213+01 | .21204372+00 | .17466902+01 | .10703718+01 |
| .55632310+00 | .13269005+01 | .20870598+00 | .17694960+01 | .11003418+01 |
| .56199536+00 | .13283005+01 | .20583395+00 | .17903014+01 | .11274113+01 |
| .56766763+00 | .13297309+01 | .20297857+00 | .18121527+01 | .11555787+01 |
| .57333990+00 | .13311927+01 | .20013731+00 | .18351350+01 | .11849296+01 |
| .57901217+00 | .13326871+01 | .19730745+00 | .18593435+01 | .12155597+01 |
| .58468444+00 | .13342157+01 | .19448640+00 | .18848849+01 | .12475758+01 |
| .58948405+00 | .13355371+01 | .19210409+00 | .19076273+01 | .12758376+01 |
| .59428366+00 | .13368853+01 | .18972413+00 | .19314927+01 | .13052595+01 |
| .59908327+00 | .13382617+01 | .18734463+00 | .19565727+01 | .13359319+01 |
| .60388289+00 | .13396677+01 | .18496355+00 | .19829702+01 | .13679565+01 |
| .60868250+00 | .13411049+01 | .18257868+00 | .20108014+01 | .14014473+01 |
| .61260945+00 | .13423054+01 | .18062298+00 | .20347294+01 | .14300283+01 |
| .61653641+00 | .13435291+01 | .17866176+00 | .20597847+01 | .14597550+01 |
| .62046336+00 | .13447773+01 | .17669355+00 | .20860572+01 | .14907148+01 |
| .62436974+00 | .13460522+01 | .17471680+00 | .21136430+01 | .15230001+01 |

$$\Theta_s = .34906584+00$$

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1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

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14 TABLE 147. CONICAL FLOWFIELD  $\theta_s = 20.0$  DEG;  $M_\infty = 2.5$

| $u_s$        | $M_\infty$    | $\theta_s$    | $\theta_w$   |              |
|--------------|---------------|---------------|--------------|--------------|
| .72065269+00 | .24999927+01  | .34906584+00  | .58513707+00 |              |
| $\theta$     | $M^*$         | $\psi_1$      | $x$          | $r$          |
|              | $\frac{1}{1}$ | $\frac{1}{1}$ |              |              |
| .34906584+00 | .14412784+01  | .34906584+00  | .13737387+01 | .50000000+00 |
| .35604715+00 | .14413466+01  | .34221473+00  | .13848316+01 | .51501422+00 |
| .36302847+00 | .14415429+01  | .33560997+00  | .13963926+01 | .53043975+00 |
| .37000978+00 | .14418565+01  | .32923212+00  | .14084478+01 | .54630086+00 |
| .37699109+00 | .14422780+01  | .32306359+00  | .14210255+01 | .56262376+00 |
| .38353607+00 | .14427639+01  | .31745651+00  | .14333193+01 | .57837115+00 |
| .39008106+00 | .14433316+01  | .31200735+00  | .14461272+01 | .59457470+00 |
| .39662604+00 | .14439761+01  | .30670504+00  | .14594798+01 | .61126193+00 |
| .40317102+00 | .14446929+01  | .30153929+00  | .14734100+01 | .62846257+00 |
| .40927967+00 | .14454237+01  | .29683272+00  | .14869647+01 | .64500821+00 |
| .41538832+00 | .14462114+01  | .29222951+00  | .15010865+01 | .66205796+00 |
| .42149696+00 | .14470536+01  | .28772283+00  | .15158104+01 | .67964278+00 |
| .42760561+00 | .14479483+01  | .28330620+00  | .15311748+01 | .69779644+00 |
| .43327793+00 | .14488246+01  | .27928027+00  | .15460518+01 | .71519493+00 |
| .43895025+00 | .14497434+01  | .27532194+00  | .15615544+01 | .73314781+00 |
| .44462257+00 | .14507040+01  | .27142670+00  | .15777226+01 | .75169011+00 |
| .45029488+00 | .14517054+01  | .26759014+00  | .15946009+01 | .77086004+00 |
| .45553087+00 | .14526656+01  | .26409710+00  | .16108528+01 | .78914850+00 |
| .46076685+00 | .14536599+01  | .26064717+00  | .16277929+01 | .80804326+00 |
| .46600284+00 | .14546881+01  | .25723712+00  | .16454671+01 | .82758359+00 |
| .47123882+00 | .14557502+01  | .25386879+00  | .16639261+01 | .84791251+00 |
| .47603847+00 | .14567538+01  | .25080118+00  | .16815835+01 | .86700079+00 |
| .48083813+00 | .14577861+01  | .24776432+00  | .16999940+01 | .88684708+00 |
| .48563778+00 | .14588476+01  | .24475087+00  | .17192095+01 | .90739505+00 |
| .49043743+00 | .14599386+01  | .24175832+00  | .17392871+01 | .92869263+00 |
| .49480075+00 | .14609564+01  | .23905390+00  | .17583403+01 | .94874870+00 |
| .49916407+00 | .14619997+01  | .23636283+00  | .17782101+01 | .96951142+00 |
| .50352737+00 | .14630690+01  | .23368311+00  | .17989540+01 | .99102835+00 |
| .50789065+00 | .14641649+01  | .23101280+00  | .18206353+01 | .10133522+01 |
| .51181760+00 | .14651746+01  | .22861583+00  | .18410082+01 | .10341817+01 |
| .51574456+00 | .14662073+01  | .22622320+00  | .18622538+01 | .10557583+01 |
| .51967151+00 | .14672636+01  | .22383332+00  | .18844348+01 | .10781336+01 |
| .52359847+00 | .14683445+01  | .22144444+00  | .19076202+01 | .11013642+01 |
| .52708910+00 | .14693266+01  | .21932037+00  | .19291344+01 | .11227822+01 |
| .53057972+00 | .14703297+01  | .21719428+00  | .19515623+01 | .11449738+01 |
| .53407035+00 | .14713545+01  | .21506483+00  | .19749695+01 | .11679926+01 |
| .53756078+00 | .14724022+01  | .21293043+00  | .19994275+01 | .11918963+01 |
| .54061440+00 | .14733392+01  | .21105733+00  | .20217508+01 | .12135864+01 |
| .54366802+00 | .14742952+01  | .20917809+00  | .20450011+01 | .12360531+01 |
| .54672164+00 | .14752709+01  | .20729145+00  | .20692446+01 | .12593496+01 |



TABLE 147. (Concluded)

$$M_{\infty} = .24999927+01$$

$$\Theta = .14904884+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $X$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .54977527+00 | .14762674+01 | .20539611+00 | .23946643+01 | .12835347+01 |
| .55239265+00 | .14771387+01 | .20376366+00 | .21171585+01 | .13090209+01 |
| .55501004+00 | .14780267+01 | .20212279+00 | .21406621+01 | .13278529+01 |
| .55762743+00 | .14789321+01 | .20047244+00 | .21461273+01 | .13502801+01 |
| .56024482+00 | .14798559+01 | .19881152+00 | .21706623+01 | .13741572+01 |
| .56242598+00 | .14806404+01 | .19741841+00 | .22127109+01 | .13947474+01 |
| .56460714+00 | .14814388+01 | .19601636+00 | .22356153+01 | .14150079+01 |
| .56678829+00 | .14822519+01 | .19460451+00 | .22593895+01 | .14379808+01 |
| .56896945+00 | .14830804+01 | .19318196+00 | .22840920+01 | .14627124+01 |
| .57071438+00 | .14837547+01 | .19203562+00 | .23045645+01 | .14794771+01 |
| .57245930+00 | .14844398+01 | .19088130+00 | .23257079+01 | .14987879+01 |
| .57420423+00 | .14851361+01 | .18971840+00 | .23475608+01 | .15186749+01 |
| .57594915+00 | .14858441+01 | .18854637+00 | .23701656+01 | .15391715+01 |
| .57725785+00 | .14863831+01 | .18766096+00 | .23876404+01 | .15549658+01 |
| .57856654+00 | .14869292+01 | .18676974+00 | .24055849+01 | .15711395+01 |
| .57987524+00 | .14874827+01 | .18587238+00 | .24240221+01 | .15877106+01 |
| .58118393+00 | .14880439+01 | .18497653+00 | .24429756+01 | .16046976+01 |
| .58249263+00 | .14886131+01 | .18405793+00 | .24624720+01 | .16221211+01 |
| .58380132+00 | .14891905+01 | .18314011+00 | .24825386+01 | .16400024+01 |
| .58511002+00 | .14897766+01 | .18221468+00 | .25032057+01 | .16583650+01 |
| .58513707+00 | .14897888+01 | .18219549+00 | .25036394+01 | .16587498+01 |

$$.33879235+01 = \Delta S/R$$

$$.25849456+01 = P_s/P_{\infty}$$

$$.17441358+01 = \rho_s/\rho_{\infty}$$

$$.14820782+01 = T_s/T_{\infty}$$

14 TABLE 148. CONICAL FLOWFIELD  $\theta_s = 20.0$  DEG;  $M_\infty = 3.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .76925317+00 | .29999926+01 | .34906584+00 | .53395650+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .34906584+00 | .15384775+01 | .34906584+00 | .13737387+01 | .50000000+00 |
| .35430103+00 | .15385180+01 | .34390340+00 | .13844679+01 | .51213020+00 |
| .35953781+00 | .15386387+01 | .33888123+00 | .13955809+01 | .52456434+00 |
| .36477380+00 | .15388324+01 | .33398977+00 | .14070968+01 | .53731800+00 |
| .37000978+00 | .15390952+01 | .32922019+00 | .14190364+01 | .55040789+00 |
| .37524576+00 | .15394232+01 | .32456436+00 | .14314221+01 | .56385210+00 |
| .38048175+00 | .15398129+01 | .32001470+00 | .14442781+01 | .57766996+00 |
| .38571773+00 | .15402612+01 | .31556416+00 | .14576309+01 | .59188247+00 |
| .39095372+00 | .15407653+01 | .31120612+00 | .14715090+01 | .60651220+00 |
| .39618970+00 | .15413229+01 | .30693438+00 | .14859434+01 | .62158352+00 |
| .40142569+00 | .15419320+01 | .30274306+00 | .15009680+01 | .63712304+00 |
| .40578901+00 | .15424774+01 | .29930769+00 | .15139659+01 | .65045100+00 |
| .41015233+00 | .15430564+01 | .29592119+00 | .15274225+01 | .66414212+00 |
| .41451565+00 | .15436681+01 | .29258060+00 | .15413630+01 | .67821586+00 |
| .41887897+00 | .15443119+01 | .28928303+00 | .15558142+01 | .69269302+00 |
| .42324229+00 | .15449871+01 | .28602567+00 | .15708060+01 | .70759639+00 |
| .42760561+00 | .15456935+01 | .28280578+00 | .15863699+01 | .72295029+00 |
| .43196893+00 | .15464306+01 | .27962068+00 | .16025407+01 | .73878127+00 |
| .43633226+00 | .15471983+01 | .27646274+00 | .16193562+01 | .75511809+00 |
| .44069558+00 | .15479963+01 | .27334435+00 | .16368578+01 | .77199213+00 |
| .44505890+00 | .15488247+01 | .27024792+00 | .16550909+01 | .78943771+00 |
| .44854955+00 | .15495094+01 | .26778848+00 | .16702369+01 | .80383059+00 |
| .45204021+00 | .15502137+01 | .26534317+00 | .16859104+01 | .81863395+00 |
| .45553087+00 | .15509377+01 | .26291081+00 | .17021414+01 | .83387031+00 |
| .45902152+00 | .15516818+01 | .26049302+00 | .17189622+01 | .84956390+00 |
| .46251218+00 | .15524460+01 | .25807938+00 | .17364084+01 | .86574116+00 |
| .46600284+00 | .15532303+01 | .25567749+00 | .17545184+01 | .88243066+00 |
| .46949349+00 | .15540366+01 | .25328293+00 | .17733340+01 | .89966353+00 |
| .47298415+00 | .15548637+01 | .25089416+00 | .17929011+01 | .91747367+00 |
| .47647481+00 | .15557126+01 | .24850969+00 | .18132700+01 | .93589824+00 |
| .47996546+00 | .15565840+01 | .24612786+00 | .18344960+01 | .95497799+00 |
| .48258346+00 | .15572527+01 | .24434226+00 | .18510144+01 | .96977449+00 |
| .48520145+00 | .15579348+01 | .24255648+00 | .18680772+01 | .98492516+00 |
| .48781944+00 | .15586305+01 | .24076973+00 | .18857147+01 | .10005422+01 |
| .49043743+00 | .15593403+01 | .23898126+00 | .19039596+01 | .10166195+01 |
| .49305541+00 | .15600649+01 | .23719032+00 | .19228476+01 | .10331830+01 |
| .49567336+00 | .15608050+01 | .23539608+00 | .19424173+01 | .10502607+01 |
| .49829131+00 | .15615606+01 | .23359744+00 | .19627110+01 | .10678834+01 |
| .50090906+00 | .15623323+01 | .23179322+00 | .19837734+01 | .10860831+01 |
| .50352645+00 | .15631205+01 | .22998216+00 | .20056533+01 | .11048948+01 |

TABLE 148. (Concluded)

$$M_{\infty} = .29999926+01$$

$$\Theta_s = .34906584+00$$

| $\Theta$     | $M^*_1$      | $\psi_1$     | $X$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .50614384+00 | .15639260+01 | .22816357+00 | .20284092+01 | .11243612+01 |
| .50788876+00 | .15644730+01 | .22694635+00 | .20440963+01 | .11377239+01 |
| .50963369+00 | .15650282+01 | .22572490+00 | .20602194+01 | .11514111+01 |
| .51137862+00 | .15655919+01 | .22449873+00 | .20767997+01 | .11654378+01 |
| .51312354+00 | .15661644+01 | .22326750+00 | .20938593+01 | .11798200+01 |
| .51486847+00 | .15667460+01 | .22203073+00 | .21114226+01 | .11945752+01 |
| .51661339+00 | .15673369+01 | .22078796+00 | .21295157+01 | .12097218+01 |
| .51835832+00 | .15679376+01 | .21953870+00 | .21481667+01 | .12252799+01 |
| .52010325+00 | .15685483+01 | .21828238+00 | .21674056+01 | .12412709+01 |
| .52184817+00 | .15691695+01 | .21701850+00 | .21872654+01 | .12577180+01 |
| .52359310+00 | .15698015+01 | .21574642+00 | .22077812+01 | .12746463+01 |
| .52446556+00 | .15701218+01 | .21510710+00 | .22182972+01 | .12832995+01 |
| .52533802+00 | .15704450+01 | .21446548+00 | .22289920+01 | .12920833+01 |
| .52621049+00 | .15707711+01 | .21382149+00 | .22398710+01 | .13010018+01 |
| .52708295+00 | .15711002+01 | .21317501+00 | .22509395+01 | .13100585+01 |
| .52795541+00 | .15714324+01 | .21252596+00 | .22622036+01 | .13192580+01 |
| .52882788+00 | .15717678+01 | .21187427+00 | .22736697+01 | .13286043+01 |
| .52970034+00 | .15721064+01 | .21121980+00 | .22853436+01 | .13381019+01 |
| .53057280+00 | .15724483+01 | .21056247+00 | .22972324+01 | .13477557+01 |
| .53144526+00 | .15727937+01 | .20990212+00 | .23093430+01 | .13575706+01 |
| .53231773+00 | .15731425+01 | .20923870+00 | .23216828+01 | .13675516+01 |
| .53319019+00 | .15734948+01 | .20857209+00 | .23342597+01 | .13777044+01 |
| .53395650+00 | .15738512+01 | .20798386+00 | .23455083+01 | .13867680+01 |

$$.71988732+01 = \Delta S/R$$

$$.31711779+01 = P_s/P_{\infty}$$

$$.19418705+01 = \rho_s/\rho_{\infty}$$

$$.16330533+01 = T_s/T_{\infty}$$

TABLE 149. CONICAL FLOWFIELD  $\theta_s = 20.0$  DEG;  $M_\infty = 4.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .82704799+00 | .39999903+01 | .34916584+00 | .48042115+00 |              |
| $\theta$     | $M^*_1$      | $\psi_1$     | $x$          | $r$          |
| .34906584+00 | .16540650+01 | .34916584+00 | .13737387+01 | .50000000+00 |
| .35255650+00 | .16540843+01 | .34560801+00 | .13833663+01 | .50897966+00 |
| .35604715+00 | .16541432+01 | .34221331+00 | .13932691+01 | .51815210+00 |
| .35953781+00 | .16542384+01 | .33887816+00 | .14034684+01 | .52752532+00 |
| .36302847+00 | .16543689+01 | .33559915+00 | .14139468+01 | .53710795+00 |
| .36651912+00 | .16545333+01 | .33237311+00 | .14247473+01 | .54690921+00 |
| .37000978+00 | .16547304+01 | .32919699+00 | .14358742+01 | .55693884+00 |
| .37350044+00 | .16549591+01 | .32606793+00 | .14473424+01 | .56720724+00 |
| .37699109+00 | .16552183+01 | .32298318+00 | .14591680+01 | .57772543+00 |
| .38048175+00 | .16555072+01 | .31994312+00 | .14713683+01 | .58850527+00 |
| .38397241+00 | .16558249+01 | .31693622+00 | .14839619+01 | .59955948+00 |
| .38746306+00 | .16561707+01 | .31396908+00 | .14969687+01 | .61090156+00 |
| .39095372+00 | .16565441+01 | .31103633+00 | .15104100+01 | .62254601+00 |
| .39444438+00 | .16569445+01 | .30813571+00 | .15243089+01 | .63450648+00 |
| .39793503+00 | .16573714+01 | .30526498+00 | .15386903+01 | .64680579+00 |
| .40142569+00 | .16578245+01 | .30242199+00 | .15535811+01 | .65945598+00 |
| .40491638+00 | .16583033+01 | .30030666+00 | .15651010+01 | .66918696+00 |
| .40666167+00 | .16585525+01 | .29820483+00 | .15769370+01 | .67913631+00 |
| .40927967+00 | .16589381+01 | .29611562+00 | .15891032+01 | .68931332+00 |
| .41187766+00 | .16593381+01 | .29403815+00 | .16016146+01 | .69972812+00 |
| .41451565+00 | .16597524+01 | .29197154+00 | .16144871+01 | .71039122+00 |
| .41713364+00 | .16601810+01 | .28991490+00 | .16277377+01 | .72131398+00 |
| .41973164+00 | .16606240+01 | .28786735+00 | .16413850+01 | .73250858+00 |
| .42236963+00 | .16610813+01 | .28582800+00 | .16554485+01 | .74398793+00 |
| .42498762+00 | .16615532+01 | .28379595+00 | .16699490+01 | .75576589+00 |
| .42760561+00 | .16620397+01 | .28177026+00 | .16849093+01 | .76785729+00 |
| .43022361+00 | .16625410+01 | .27975001+00 | .17003538+01 | .78027820+00 |
| .43284160+00 | .16630572+01 | .27773426+00 | .17163086+01 | .79304578+00 |
| .43545959+00 | .16635885+01 | .27572200+00 | .17328022+01 | .80617858+00 |
| .43807758+00 | .16641352+01 | .27371224+00 | .17498653+01 | .81969666+00 |
| .44069558+00 | .16646977+01 | .27170392+00 | .17675312+01 | .83362168+00 |
| .44244090+00 | .16650815+01 | .27036533+00 | .17796611+01 | .84314267+00 |
| .44418823+00 | .16654725+01 | .26902657+00 | .17920865+01 | .85286239+00 |
| .44593156+00 | .16658709+01 | .26768726+00 | .18048197+01 | .86278880+00 |
| .44767689+00 | .16662767+01 | .26634714+00 | .18178735+01 | .87293027+00 |
| .44942220+00 | .16666907+01 | .26500587+00 | .18312617+01 | .88329559+00 |
| .45116749+00 | .16671125+01 | .26366305+00 | .18449989+01 | .89389421+00 |
| .45291279+00 | .16675423+01 | .26231821+00 | .18591009+01 | .90473627+00 |
| .45465809+00 | .16679802+01 | .26097099+00 | .18735843+01 | .91583249+00 |
| .45640339+00 | .16684263+01 | .25962091+00 | .18884669+01 | .92719427+00 |

TABLE 149. (Concluded)

$$M_3 = .39999903+01$$

$$\Theta_2 = .34906564+00$$

| $\underline{\theta}$ | $\underline{M}_1$ | $\underline{\psi}_1$ | $\underline{x}$ | $\underline{r}$ |
|----------------------|-------------------|----------------------|-----------------|-----------------|
| •45811869+00         | •16688809+01      | •25826756+00         | •19037677+01    | •93883378+00    |
| •45987399+00         | •16693442+01      | •25691044+00         | •19195072+01    | •95076404+00    |
| •46163929+00         | •16698164+01      | •25554911+00         | •19357072+01    | •96299907+00    |
| •46333458+00         | •16702979+01      | •25418303+00         | •19523911+01    | •97555371+00    |
| •46512988+00         | •16707888+01      | •25281161+00         | •19695845+01    | •98844427+00    |
| •46687518+00         | •16712894+01      | •25143434+00         | •19873143+01    | •10016879+01    |
| •46774783+00         | •16715434+01      | •25074334+00         | •19963897+01    | •10084479+01    |
| •46862048+00         | •16718001+01      | •25005060+00         | •20056103+01    | •10153034+01    |
| •46947313+00         | •16720593+01      | •24935611+00         | •20149803+01    | •10222567+01    |
| •47034578+00         | •16723212+01      | •24865974+00         | •20245042+01    | •10293108+01    |
| •47123843+00         | •16725859+01      | •24796143+00         | •20341861+01    | •10364684+01    |
| •47211108+00         | •16728532+01      | •24726106+00         | •20440308+01    | •10437323+01    |
| •47298373+00         | •16731234+01      | •24655855+00         | •20540430+01    | •10511056+01    |
| •47386637+00         | •16733964+01      | •24585382+00         | •20642278+01    | •10585915+01    |
| •47472902+00         | •16736723+01      | •24514675+00         | •20745902+01    | •10661931+01    |
| •47560167+00         | •16739512+01      | •24443726+00         | •20851361+01    | •10739142+01    |
| •47647432+00         | •16742332+01      | •24372520+00         | •20958709+01    | •10817581+01    |
| •47734697+00         | •16745182+01      | •24301046+00         | •21068007+01    | •10897287+01    |
| •47821962+00         | •16748064+01      | •24229297+00         | •21179318+01    | •10978299+01    |
| •47907227+00         | •16750979+01      | •24157256+00         | •21292710+01    | •11060660+01    |
| •47996492+00         | •16753927+01      | •24084916+00         | •21408248+01    | •11144411+01    |
| •48042115+00         | •16755482+01      | •24046970+00         | •21469532+01    | •11188766+01    |

• 19716164+00 = ΔS/R

46522403+01 = P<sub>s</sub>/P<sub>∞</sub>

$$.23245 + 40 + 01 = \rho_s / \rho_m$$

20013362+01 T<sub>S</sub>/T<sub>ss</sub>



TABLE 150. CONICAL FLOWFIELD  $\theta_s = 20.0$  DEG;  $M_\infty = 5.0$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .85803021+00 | .49999844+01 | .34906584+00 | .45427043+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .34906584+00 | .17160282+01 | .34906584+00 | .13737387+01 | .50000000+00 |
| .35299283+00 | .17160543+01 | .34518015+00 | .13866506+01 | .51087512+00 |
| .35691982+00 | .17161307+01 | .34137293+00 | .14000351+01 | .52205957+00 |
| .36084681+00 | .17162549+01 | .33763832+00 | .14139185+01 | .53357035+00 |
| .36477380+00 | .17164250+01 | .33397086+00 | .14283296+01 | .54542601+00 |
| .36870078+00 | .17166390+01 | .33036542+00 | .14432996+01 | .55764657+00 |
| .37219144+00 | .17168650+01 | .32720873+00 | .14571031+01 | .56883328+00 |
| .37568210+00 | .17171234+01 | .32409396+00 | .14714011+01 | .58034205+00 |
| .37917275+00 | .17174136+01 | .32101801+00 | .14862220+01 | .59219085+00 |
| .38266341+00 | .17177348+01 | .31797786+00 | .15015965+01 | .60439907+00 |
| .38615407+00 | .17180864+01 | .31497061+00 | .15175579+01 | .61698777+00 |
| .38920839+00 | .17184185+01 | .31236399+00 | .15320341+01 | .62833293+00 |
| .39226272+00 | .17187733+01 | .30977850+00 | .15470140+01 | .64000343+00 |
| .39531704+00 | .17191505+01 | .30721229+00 | .15625264+01 | .65201731+00 |
| .39837136+00 | .17195500+01 | .30466349+00 | .15786025+01 | .66439396+00 |
| .40142569+00 | .17199718+01 | .30213029+00 | .15952760+01 | .67715440+00 |
| .40440436+00 | .17203510+01 | .29996999+00 | .16100710+01 | .68841470+00 |
| .40666167+00 | .17207466+01 | .29781861+00 | .16253574+01 | .69998942+00 |
| .40927967+00 | .17211587+01 | .29567497+00 | .16411624+01 | .71189532+00 |
| .41189766+00 | .17215873+01 | .29353787+00 | .16575156+01 | .72415065+00 |
| .41451565+00 | .17220326+01 | .29140608+00 | .16744489+01 | .73677507+00 |
| .41669731+00 | .17224167+01 | .28963273+00 | .16890282+01 | .74759267+00 |
| .41887897+00 | .17228127+01 | .28786143+00 | .17040566+01 | .75869476+00 |
| .42106063+00 | .17232208+01 | .28609142+00 | .17195574+01 | .77009570+00 |
| .42324229+00 | .17236410+01 | .28432190+00 | .17355558+01 | .78181080+00 |
| .42542395+00 | .17240738+01 | .28255204+00 | .17520795+01 | .79385677+00 |
| .42716928+00 | .17244292+01 | .28113533+00 | .17656962+01 | .80374373+00 |
| .42891459+00 | .17247933+01 | .27971750+00 | .17796840+01 | .81386366+00 |
| .43065989+00 | .17251661+01 | .27829802+00 | .17940604+01 | .82422714+00 |
| .43240518+00 | .17255475+01 | .27687634+00 | .18088441+01 | .83484542+00 |
| .43415048+00 | .17259377+01 | .27545196+00 | .18240550+01 | .84573060+00 |
| .43545946+00 | .17262362+01 | .27438159+00 | .18357566+01 | .85407736+00 |
| .43676843+00 | .17265398+01 | .27330915+00 | .18477200+01 | .86258724+00 |
| .43807741+00 | .17268487+01 | .27223442+00 | .18599557+01 | .87126637+00 |
| .43938638+00 | .17271630+01 | .27115713+00 | .18724743+01 | .88012117+00 |
| .44069535+00 | .17274827+01 | .27007702+00 | .18852872+01 | .88915852+00 |
| .44156800+00 | .17276989+01 | .26935524+00 | .18939987+01 | .89528839+00 |
| .44244065+00 | .17279177+01 | .26863201+00 | .19028501+01 | .90150481+00 |
| .44331330+00 | .17281389+01 | .26790724+00 | .19118454+01 | .90781014+00 |
| .44418595+00 | .17283628+01 | .26718081+00 | .19209886+01 | .91420684+00 |

-3



CLASSIFICATION

257

PAGE AND OR FILE NUMBER

1. What is the purpose of the document?

$$\Theta_s = .34906584 + 00$$

1952年 10月 27日 星期一

$u_s$        $M_\infty$        $\theta_s$        $\theta_w$   
 .87625138+00    .59999865+01    .34936584+00    .43956962+00

| $\theta$     | $M_1^*$      | $\psi_1$     | $\pi$        | $F$          |
|--------------|--------------|--------------|--------------|--------------|
| .34906584+00 | .17524699+01 | .34906584+00 | .13737387+01 | .50000000+00 |
| .35255650+00 | .17524910+01 | .34560782+00 | .13865329+01 | .51014476+00 |
| .35604715+00 | .17525529+01 | .34221183+00 | .13997785+01 | .52057295+00 |
| .35953781+00 | .17526539+01 | .33987324+00 | .14135001+01 | .53129975+00 |
| .36302847+00 | .17527925+01 | .33558771+00 | .14277246+01 | .54234166+00 |
| .36651912+00 | .17529673+01 | .33235114+00 | .14424808+01 | .55371647+00 |
| .37000978+00 | .17531773+01 | .32915962+00 | .14578006+01 | .56544355+00 |
| .37306410+00 | .17533891+01 | .32640106+00 | .14716950+01 | .57601029+00 |
| .37611943+00 | .17536265+01 | .32367173+00 | .14860723+01 | .58687797+00 |
| .37917275+00 | .17538891+01 | .32096929+00 | .15009598+01 | .59806317+00 |
| .38222708+00 | .17541763+01 | .31829195+00 | .15163871+01 | .60958363+00 |
| .38528140+00 | .17544800+01 | .31563596+00 | .15323863+01 | .62145877+00 |
| .38833573+00 | .17548238+01 | .31300062+00 | .15489924+01 | .63370944+00 |
| .39095372+00 | .17551308+01 | .31075612+00 | .15663780+01 | .64645262+00 |
| .39357171+00 | .17554554+01 | .30852342+00 | .15789835+01 | .65965123+00 |
| .39618970+00 | .17557976+01 | .30630112+00 | .15947573+01 | .66710135+00 |
| .39880770+00 | .17561574+01 | .30408703+00 | .16110900+01 | .67889478+00 |
| .40142569+00 | .17565349+01 | .30188211+00 | .16280150+01 | .69105127+00 |
| .40404368+00 | .17569303+01 | .29968254+00 | .16455687+01 | .70359236+00 |
| .40662534+00 | .17572735+01 | .29785117+00 | .16607054+01 | .71435379+00 |
| .40840700+00 | .17576294+01 | .29602616+00 | .16763311+01 | .72541317+00 |
| .41058866+00 | .17579981+01 | .29420058+00 | .16924729+01 | .73678633+00 |
| .41277032+00 | .17583798+01 | .29237551+00 | .17091599+01 | .74849040+00 |
| .41495198+00 | .17587748+01 | .29054997+00 | .17264235+01 | .76054373+00 |
| .41713363+00 | .17591836+01 | .28872300+00 | .17442981+01 | .77296641+00 |
| .41887893+00 | .17595210+01 | .28725968+00 | .17590628+01 | .78318503+00 |
| .42062423+00 | .17598673+01 | .28579418+00 | .17742634+01 | .79366612+00 |
| .42236952+00 | .17602229+01 | .28432589+00 | .17899223+01 | .80442265+00 |
| .42411482+00 | .17605870+01 | .28285422+00 | .18060634+01 | .81548649+00 |
| .42586012+00 | .17609623+01 | .28137853+00 | .18227127+01 | .82681867+00 |
| .42760542+00 | .17613467+01 | .27999813+00 | .18398982+01 | .83848935+00 |
| .42891439+00 | .17616416+01 | .27878430+00 | .18531575+01 | .84746324+00 |
| .43022337+00 | .17619424+01 | .27766707+00 | .18667493+01 | .85663518+00 |
| .43153234+00 | .17622491+01 | .27654617+00 | .18806881+01 | .86601357+00 |
| .43284132+00 | .17625619+01 | .27542118+00 | .18949888+01 | .87560741+00 |
| .43415029+00 | .17628810+01 | .27429175+00 | .19096708+01 | .88542627+00 |
| .43545926+00 | .17632065+01 | .27315751+00 | .19247490+01 | .89548024+00 |
| .43633191+00 | .17634271+01 | .27239848+00 | .19350315+01 | .90231907+00 |
| .43720456+00 | .17636507+01 | .27163699+00 | .19455049+01 | .90927062+00 |
| .43807721+00 | .17638775+01 | .27087293+00 | .19561756+01 | .91633859+00 |
| .43894986+00 | .17641073+01 | .27010615+00 | .19670503+01 | .92352670+00 |
| .43956962+00 | .17642724+01 | .26955985+00 | .19749012+01 | .92870688+00 |

.58076409+00 =  $\Delta S/R$

.88557160+01 =  $P_g/P_\infty$

.29338018+01 =  $\rho_g/\rho_\infty$

.30185122+01 =  $T_g/T_\infty$

USDA 1001

EXTENSIVE LIMIT

CLASSIFICATION

PAGE AND OR FILE NUMBER

TABLE 152. CONICAL FLOWFIELD  $\theta_s = 20.0$  DEG;  $M_\infty = 8.0$

| $\underline{u}_s$    | $\underline{M}_\infty$ | $\underline{\theta}_s$ | $\underline{\theta}_w$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .89548113+00         | .79999573+01           | .34906584+00           | .42453192+00           |                 |
| $\underline{\theta}$ | $\underline{M}_1^*$    | $\underline{\psi}_1$   | $\underline{x}$        | $\underline{r}$ |
| .34906584+00         | .17909287+01           | .34906584+00           | .13737387+01           | .50000000+00    |
| .35124750+00         | .17909372+01           | .34689702+00           | .13827577+01           | .50670170+00    |
| .35342916+00         | .17909622+01           | .34475295+00           | .13919938+01           | .51353359+00    |
| .35561082+00         | .17910034+01           | .34263230+00           | .14014549+01           | .52050041+00    |
| .35779248+00         | .17910602+01           | .34053377+00           | .14111499+01           | .52760729+00    |
| .35997414+00         | .17911324+01           | .33845613+00           | .14210877+01           | .53485949+00    |
| .36215580+00         | .17912196+01           | .33639819+00           | .14312779+01           | .54226266+00    |
| .36433746+00         | .17913214+01           | .33435879+00           | .14417309+01           | .54982276+00    |
| .36651912+00         | .17914377+01           | .33233681+00           | .14524575+01           | .55754615+00    |
| .36870078+00         | .17915682+01           | .33033117+00           | .14634694+01           | .56543954+00    |
| .37088244+00         | .17917125+01           | .32834080+00           | .14747787+01           | .57351001+00    |
| .37306410+00         | .17918707+01           | .32636466+00           | .14863985+01           | .58176513+00    |
| .37480943+00         | .17920070+01           | .32479331+00           | .14959272+01           | .58850750+00    |
| .37655476+00         | .17921519+01           | .32322989+00           | .15056712+01           | .59537753+00    |
| .37830009+00         | .17923054+01           | .32167389+00           | .15156385+01           | .60237984+00    |
| .38004542+00         | .17924674+01           | .32012482+00           | .15258372+01           | .60951914+00    |
| .38179075+00         | .17926379+01           | .31858214+00           | .15362765+01           | .61680061+00    |
| .38353607+00         | .17928168+01           | .31704538+00           | .15469656+01           | .62422956+00    |
| .38528140+00         | .17930042+01           | .31551400+00           | .15579144+01           | .63181168+00    |
| .38702673+00         | .17932000+01           | .31398752+00           | .15691336+01           | .63955297+00    |
| .38877206+00         | .17934042+01           | .31246641+00           | .15806344+01           | .64745981+00    |
| .39051739+00         | .17936169+01           | .31094716+00           | .15924286+01           | .65553892+00    |
| .39226272+00         | .17938381+01           | .30943225+00           | .16045287+01           | .66379739+00    |
| .39357171+00         | .17940095+01           | .30829795+00           | .16138125+01           | .67011350+00    |
| .39488071+00         | .17941858+01           | .30716500+00           | .16232820+01           | .67653818+00    |
| .39618970+00         | .17943669+01           | .30603318+00           | .16329433+01           | .68307488+00    |
| .39749870+00         | .17945529+01           | .30490225+00           | .16428031+01           | .68972743+00    |
| .39880770+00         | .17947438+01           | .30377198+00           | .16528682+01           | .69649962+00    |
| .40011669+00         | .17949396+01           | .30264212+00           | .16631460+01           | .70339564+00    |
| .40142569+00         | .17951404+01           | .30151244+00           | .16736442+01           | .71041974+00    |
| .40273469+00         | .17953462+01           | .30038266+00           | .16843707+01           | .71757641+00    |
| .40404368+00         | .17955572+01           | .29925254+00           | .16953341+01           | .72487045+00    |
| .40535267+00         | .17957734+01           | .29812183+00           | .17065434+01           | .73230691+00    |
| .40666164+00         | .17959953+01           | .29699028+00           | .17180080+01           | .73989098+00    |
| .40797062+00         | .17962235+01           | .29585777+00           | .17297278+01           | .74750318+00    |
| .40927959+00         | .17964548+01           | .29472338+00           | .17417439+01           | .75502455+00    |
| .41058856+00         | .17966881+01           | .29358811+00           | .17540068+01           | .76245590+00    |
| .41189754+00         | .17969361+01           | .29244918+00           | .17665299+01           | .77000217+00    |



TABLE 152. (Concluded)

M<sub>3</sub> = .79999573+01

$$\Theta = 0.34906584 + 00$$

| <u>e</u>     | <u>M*</u><br><u>1</u> | <u>ψ</u><br><u>1</u> | <u>x</u>     | <u>r</u>     |
|--------------|-----------------------|----------------------|--------------|--------------|
| •41277019+00 | •17971015+01          | •29168949+00         | •17751976+01 | •77740991+00 |
| •41364284+00 | •17972695+01          | •29092836+00         | •17839079+01 | •78308039+00 |
| •41451549+00 | •17974400+01          | •29016598+00         | •17927650+01 | •78883501+00 |
| •41538814+00 | •17976131+01          | •28940222+00         | •18017731+01 | •79467614+00 |
| •41626079+00 | •17977889+01          | •28863699+00         | •18109368+01 | •80060627+00 |
| •41669711+00 | •17978777+01          | •28825379+00         | •18155785+01 | •80360550+00 |
| •41713344+00 | •17979673+01          | •28787018+00         | •18202608+01 | •80662801+00 |
| •41756976+00 | •17980575+01          | •28748614+00         | •18249845+01 | •80967408+00 |
| •41800608+00 | •17981485+01          | •28710167+00         | •18297501+01 | •81274408+00 |
| •41844241+00 | •17982401+01          | •28671674+00         | •18345581+01 | •81583830+00 |
| •41887873+00 | •17983324+01          | •28633134+00         | •18394095+01 | •81895723+00 |
| •41931506+00 | •17984254+01          | •28594546+00         | •18443048+01 | •82210117+00 |
| •41975138+00 | •17985191+01          | •28555908+00         | •18492447+01 | •82527053+00 |
| •42016771+00 | •17986135+01          | •28517218+00         | •18542300+01 | •82846569+00 |
| •42062403+00 | •17987056+01          | •28478474+00         | •18592613+01 | •83168707+00 |
| •42106036+00 | •17988045+01          | •28439676+00         | •18643394+01 | •83493504+00 |
| •42149668+00 | •17989011+01          | •28400822+00         | •18694651+01 | •83821001+00 |
| •42193301+00 | •17989984+01          | •28361910+00         | •18746391+01 | •84151246+00 |
| •42236933+00 | •17990965+01          | •28322937+00         | •18798623+01 | •84484281+00 |
| •42280566+00 | •17991954+01          | •28283903+00         | •18851354+01 | •84820152+00 |
| •42324198+00 | •17992949+01          | •28244806+00         | •18904594+01 | •85158902+00 |
| •42367831+00 | •17993953+01          | •28205644+00         | •18958351+01 | •85500585+00 |
| •42411463+00 | •17994964+01          | •28166414+00         | •19012633+01 | •85845239+00 |
| •42453192+00 | •17995939+01          | •28128831+00         | •19065047+01 | •86177693+00 |

• 10283008+01 = ΔS/R

• 14725590+02 = P<sub>s</sub>/P<sub>s</sub>

• 33280414+01 =  $\rho_s/\rho_{\infty}$

44247618+01 = T<sub>s</sub>/T<sub>o</sub>

3  
2  
1  
2  
3

SECRET

CONFIDENTIAL

CLASSIFICATION

261

2571

DATE AND OR FILE NUMBER



TABLE 153. CONICAL FLOWFIELD  $\theta_s = 20.0$  DEG;  $M_\infty = 10.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .90479387+00 | .99999574+01 | .34906584+00 | .41740905+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .34906584+00 | .18095538+01 | .34906584+00 | .13737387+01 | .50000000+00 |
| .35081117+00 | .18095593+01 | .34732875+00 | .13814332+01 | .50553276+00 |
| .35255650+00 | .18095756+01 | .34560252+00 | .13892834+01 | .51115673+00 |
| .35430163+00 | .18096024+01 | .34390170+00 | .13972941+01 | .51687474+00 |
| .35604715+00 | .18096395+01 | .34221326+00 | .14054705+01 | .52268975+00 |
| .35779248+00 | .18096867+01 | .34053259+00 | .14138180+01 | .52860486+00 |
| .35953761+00 | .18097439+01 | .33886803+00 | .14223423+01 | .53462330+00 |
| .36128314+00 | .18098108+01 | .33721590+00 | .14310494+01 | .54074845+00 |
| .36302847+00 | .18098874+01 | .33557556+00 | .14399455+01 | .54678396+00 |
| .36477380+00 | .18099733+01 | .33394638+00 | .14490374+01 | .55283354+00 |
| .36651912+00 | .18100687+01 | .33232775+00 | .14583318+01 | .55890108+00 |
| .36826445+00 | .18101732+01 | .33071905+00 | .14678362+01 | .56639083+00 |
| .37000978+00 | .18102868+01 | .32911870+00 | .14775583+01 | .57310707+00 |
| .37175511+00 | .18104094+01 | .32752910+00 | .14875064+01 | .57995447+00 |
| .37350044+00 | .18105410+01 | .32594669+00 | .14976889+01 | .58693780+00 |
| .37524576+00 | .18106815+01 | .32437188+00 | .15081147+01 | .59406214+00 |
| .37699109+00 | .18108326+01 | .32280542+00 | .15188999+01 | .59950125+00 |
| .37873642+00 | .18109907+01 | .32202269+00 | .15242316+01 | .60502513+00 |
| .37997275+00 | .18110297+01 | .32085343+00 | .15325145+01 | .61063627+00 |
| .38048175+00 | .18111597+01 | .31968741+00 | .15409531+01 | .61633722+00 |
| .38179075+00 | .18112865+01 | .31852440+00 | .15495525+01 | .62213082+00 |
| .38309974+00 | .18114223+01 | .31736415+00 | .15583175+01 | .62801978+00 |
| .38440874+00 | .18115630+01 | .31620642+00 | .15672537+01 | .63400716+00 |
| .38571773+00 | .18117086+01 | .31505097+00 | .15763666+01 | .64009602+00 |
| .38702673+00 | .18118591+01 | .31389255+00 | .15856620+01 | .64628967+00 |
| .38833573+00 | .18120146+01 | .31274592+00 | .15951462+01 | .65259148+00 |
| .38964472+00 | .18121750+01 | .31159582+00 | .16048256+01 | .65900505+00 |
| .39095372+00 | .18123404+01 | .31044701+00 | .16147070+01 | .66553412+00 |
| .39226272+00 | .18125108+01 | .30929923+00 | .16247973+01 | .67218257+00 |
| .39357171+00 | .18126863+01 | .30815221+00 | .16351044+01 | .67895467+00 |
| .39488071+00 | .18128669+01 | .30700569+00 | .16456361+01 | .68585472+00 |
| .39575337+00 | .18129901+01 | .30624149+00 | .16527860+01 | .69052809+00 |
| .39662604+00 | .18131156+01 | .30547730+00 | .16600421+01 | .69526183+00 |
| .39749870+00 | .18132434+01 | .30471305+00 | .16674070+01 | .70005734+00 |
| .39837136+00 | .18133736+01 | .30394866+00 | .16748835+01 | .70491622+00 |
| .39924403+00 | .18135061+01 | .30318402+00 | .16824744+01 | .70984000+00 |
| .40011669+00 | .18136411+01 | .30241908+00 | .16901827+01 | .71483028+00 |
| .40098934+00 | .18137786+01 | .30165373+00 | .16980117+01 | .71988885+00 |
| .40186198+00 | .18139186+01 | .30088789+00 | .17059646+01 | .72501748+00 |
| .40273463+00 | .18140610+01 | .30012144+00 | .17140446+01 | .73021798+00 |

TABLE 153. (Concluded)

$$M_{\infty} = .99999574+01$$

$$\Theta_s = .34906584+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .40360728+00 | .18142058+01 | .29935430+00 | .17222553+01 | .73549227+00 |
| .40447993+00 | .18143531+01 | .29856636+00 | .17306004+01 | .74084235+00 |
| .40535258+00 | .18145029+01 | .29781754+00 | .17390838+01 | .74627036+00 |
| .40622523+00 | .18146552+01 | .29704772+00 | .17477093+01 | .75177836+00 |
| .40709788+00 | .18148101+01 | .29627680+00 | .17564811+01 | .75736865+00 |
| .40797053+00 | .18149676+01 | .29550466+00 | .17654037+01 | .76304361+00 |
| .40884085+00 | .18150473+01 | .29511811+00 | .17699229+01 | .76591361+00 |
| .40884318+00 | .18151277+01 | .29473121+00 | .17744814+01 | .76880567+00 |
| .40927950+00 | .18152087+01 | .29434396+00 | .17790799+01 | .77172012+00 |
| .40971583+00 | .18152904+01 | .29395633+00 | .17837190+01 | .77465737+00 |
| .41015215+00 | .18153728+01 | .29356832+00 | .17883993+01 | .77761766+00 |
| .41058848+00 | .18154559+01 | .29317990+00 | .17931213+01 | .78060135+00 |
| .41102480+00 | .18155396+01 | .29279106+00 | .17978859+01 | .78360882+00 |
| .41146113+00 | .18156241+01 | .29240179+00 | .18026937+01 | .78664044+00 |
| .41189745+00 | .18157092+01 | .29201207+00 | .18075453+01 | .78969657+00 |
| .41233378+00 | .18157950+01 | .29162188+00 | .18124413+01 | .79277751+00 |
| .41277010+00 | .18158816+01 | .29123120+00 | .18173826+01 | .79588377+00 |
| .41320642+00 | .18159688+01 | .29084003+00 | .18223700+01 | .79901569+00 |
| .41364275+00 | .18160567+01 | .29044835+00 | .18274040+01 | .80217366+00 |
| .41407907+00 | .18161454+01 | .29005613+00 | .18324855+01 | .80535807+00 |
| .41451540+00 | .18162349+01 | .28966336+00 | .18376153+01 | .80856942+00 |
| .41495172+00 | .18163250+01 | .28927003+00 | .18427942+01 | .81180811+00 |
| .41538805+00 | .18164159+01 | .28887610+00 | .18480230+01 | .81507457+00 |
| .41582437+00 | .18165075+01 | .28848157+00 | .18533025+01 | .81836924+00 |
| .41626070+00 | .18166000+01 | .28808642+00 | .18586338+01 | .82169266+00 |
| .41669702+00 | .18166931+01 | .28769062+00 | .18640174+01 | .82504518+00 |
| .41713335+00 | .18167870+01 | .28729416+00 | .18694545+01 | .82842743+00 |
| .41740905+00 | .18168468+01 | .28704328+00 | .18729180+01 | .83058009+00 |

$$.14687875+01 = \Delta S/R$$

$$.22267416+02 = P_s/P_{\infty}$$

$$.35762145+01 = \rho_s/\rho_{\infty}$$

$$.62265326+01 = T_s/T_{\infty}$$

TABLE 154. CONICAL FLOWFIELD  $\theta_s = 20.0$  DEG;  $M_\infty = 12.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |                |
|--------------|--------------|--------------|--------------|----------------|
| .91090064+00 | .12499986+02 | .34906584+00 | .41279072+00 |                |
| $\theta$     | $M^*_1$      | $\psi_1$     | $x$          | $r$            |
| .34906584+00 | .18217671+01 | .34906584+00 | .13737387+01 | .50000000+00   |
| .35081117+00 | .18217726+01 | .34732874+00 | .13017970+01 | .50566589+00   |
| .35255650+00 | .18217890+01 | .34560756+00 | .13900247+01 | .51142948+00   |
| .35430183+00 | .18218160+01 | .34390150+00 | .13984273+01 | .51729393+00   |
| .35604715+00 | .18218534+01 | .34220979+00 | .14070106+01 | .52326255+00   |
| .35779249+00 | .18219010+01 | .34053169+00 | .14157810+01 | .52933881+00   |
| .35953781+00 | .18219585+01 | .33886648+00 | .14247449+01 | .53552639+00   |
| .36128314+00 | .18220260+01 | .33721345+00 | .14339092+01 | .54182909+00   |
| .36302847+00 | .18221031+01 | .33557194+00 | .14432810+01 | .54825097+00   |
| .36477380+00 | .18221897+01 | .33394125+00 | .14528681+01 | .55479634+00   |
| .36651912+00 | .18222858+01 | .33232075+00 | .14626783+01 | .56146955+00   |
| .36826445+00 | .18223912+01 | .33070979+00 | .14727203+01 | .56827542+00   |
| .37000978+00 | .18225058+01 | .32910774+00 | .14830030+01 | .57521890+00   |
| .37175511+00 | .18226296+01 | .32751396+00 | .14935359+01 | .58230528+00   |
| .37350044+00 | .18227624+01 | .32592785+00 | .15043291+01 | .58954008+00   |
| .37524576+00 | .18229042+01 | .32434878+00 | .15153931+01 | .59692919+00   |
| .37699109+00 | .18230560+01 | .32278673+00 | .15267357+01 | .60457602+00   |
| .37873642+00 | .18232188+01 | .32124104+00 | .15383521+01 | .61249333+00   |
| .38048175+00 | .18233936+01 | .31971171+00 | .15502373+01 | .62068661+00   |
| .38222708+00 | .18235804+01 | .31819855+00 | .15623875+01 | .62916264+00   |
| .38397241+00 | .18237792+01 | .31670109+00 | .15748035+01 | .63792610+00   |
| .38571774+00 | .18239900+01 | .31521891+00 | .15874823+01 | .64698173+00   |
| .38746307+00 | .18242128+01 | .31375243+00 | .15994208+01 | .65633635+00   |
| .38920840+00 | .18244476+01 | .31230191+00 | .16116143+01 | .66599639+00   |
| .39095373+00 | .18246944+01 | .31086733+00 | .16240695+01 | .67596460+00   |
| .39269906+00 | .18249532+01 | .30944813+00 | .16367922+01 | .68623370+00   |
| .39444439+00 | .18252240+01 | .30804380+00 | .16497770+01 | .69680618+00   |
| .39618972+00 | .18255068+01 | .30665473+00 | .16629280+01 | .70768520+00   |
| .39793505+00 | .18258016+01 | .30528132+00 | .16762497+01 | .71887384+00   |
| .39968038+00 | .18261084+01 | .30392280+00 | .16897363+01 | .73037515+00   |
| .40142571+00 | .18264272+01 | .30257944+00 | .17033829+01 | .74219337+00   |
| .40317104+00 | .18267580+01 | .30125140+00 | .17171939+01 | .75433252+00   |
| .40491637+00 | .18271008+01 | .30003880+00 | .17311748+01 | .76679663+00   |
| .40666170+00 | .18274556+01 | .29884172+00 | .17453309+01 | .77959052+00   |
| .40840703+00 | .18278224+01 | .29766016+00 | .17596574+01 | .79271956+00   |
| .41015236+00 | .18282012+01 | .29649412+00 | .17741597+01 | .80618900+00   |
| .41189769+00 | .18285920+01 | .29534360+00 | .17888422+01 | .81999420+00   |
| .41364302+00 | .18290048+01 | .29420860+00 | .18037000+01 | .83414050+00   |
| .41538835+00 | .18294296+01 | .29308912+00 | .18187384+01 | .84863310+00   |
| .41713368+00 | .18298664+01 | .29198516+00 | .18339628+01 | .86347820+00   |
| .41887901+00 | .18303152+01 | .29089672+00 | .18493684+01 | .87868100+00   |
| .42062434+00 | .18307760+01 | .28982380+00 | .18649504+01 | .89424680+00   |
| .42236967+00 | .18312488+01 | .28876640+00 | .18807140+01 | .91018000+00   |
| .42411500+00 | .18317336+01 | .28772452+00 | .18966644+01 | .92648600+00   |
| .42586033+00 | .18322304+01 | .28669816+00 | .19128068+01 | .94316920+00   |
| .42760566+00 | .18327392+01 | .28568732+00 | .19291364+01 | .96023500+00   |
| .42935099+00 | .18332600+01 | .28469200+00 | .19456584+01 | .97768880+00   |
| .43109632+00 | .18337928+01 | .28371220+00 | .19623680+01 | .99553500+00   |
| .43284165+00 | .18343376+01 | .28274792+00 | .19792704+01 | .1.01377920+01 |
| .43458698+00 | .18348944+01 | .28179916+00 | .19963708+01 | .1.03242600+01 |
| .43633231+00 | .18354632+01 | .28086592+00 | .20136744+01 | .1.05148080+01 |
| .43807764+00 | .18360440+01 | .27994820+00 | .20311864+01 | .1.07094800+01 |
| .43982297+00 | .18366368+01 | .27904600+00 | .20489024+01 | .1.09083200+01 |
| .44156830+00 | .18372416+01 | .27815920+00 | .20668280+01 | .1.11113800+01 |
| .44331363+00 | .18378584+01 | .27728780+00 | .20849680+01 | .1.13187200+01 |
| .44505896+00 | .18384872+01 | .27643180+00 | .21033280+01 | .1.15303800+01 |
| .44680429+00 | .18391280+01 | .27559120+00 | .21219040+01 | .1.17464000+01 |
| .44854962+00 | .18397808+01 | .27476600+00 | .21406920+01 | .1.19668400+01 |
| .45029495+00 | .18404456+01 | .27395620+00 | .21596992+01 | .1.21917600+01 |
| .45204028+00 | .18411224+01 | .27316180+00 | .21789320+01 | .1.24212200+01 |
| .45378561+00 | .18418112+01 | .27238280+00 | .21983864+01 | .1.26552800+01 |
| .45553094+00 | .18425120+01 | .27161920+00 | .22180680+01 | .1.28939800+01 |
| .45727627+00 | .18432248+01 | .27087100+00 | .22379840+01 | .1.31373600+01 |
| .45902160+00 | .18439496+01 | .27013820+00 | .22581400+01 | .1.33854800+01 |
| .46076693+00 | .18446864+01 | .26942080+00 | .22785424+01 | .1.36383800+01 |
| .46251226+00 | .18454352+01 | .26871800+00 | .22991960+01 | .1.38961200+01 |
| .46425759+00 | .18461960+01 | .26803060+00 | .23191072+01 | .1.41587600+01 |
| .46600292+00 | .18469688+01 | .26735860+00 | .23392800+01 | .1.44263600+01 |
| .46774825+00 | .18477536+01 | .26670190+00 | .23597200+01 | .1.46989600+01 |
| .46949358+00 | .18485504+01 | .26606040+00 | .23804320+01 | .1.49765800+01 |
| .47123891+00 | .18493592+01 | .26543400+00 | .24014224+01 | .1.52592600+01 |
| .47298424+00 | .18501800+01 | .26482260+00 | .24226960+01 | .1.55470400+01 |
| .47472957+00 | .18510128+01 | .26422620+00 | .24442592+01 | .1.58399600+01 |
| .47647490+00 | .18518576+01 | .26364480+00 | .24660176+01 | .1.61380800+01 |
| .47822023+00 | .18527144+01 | .26307840+00 | .24879760+01 | .1.64414400+01 |
| .47996556+00 | .18535832+01 | .26252700+00 | .25091400+01 | .1.67501000+01 |
| .48171089+00 | .18544640+01 | .26199060+00 | .25305160+01 | .1.70641200+01 |
| .48345622+00 | .18553568+01 | .26146920+00 | .25521000+01 | .1.73835400+01 |
| .48520155+00 | .18562616+01 | .26096280+00 | .25738960+01 | .1.77084200+01 |
| .48694688+00 | .18571784+01 | .26047140+00 | .25959080+01 | .1.80388000+01 |
| .48869221+00 | .18581072+01 | .26000500+00 | .26181400+01 | .1.83747200+01 |
| .49043754+00 | .18590480+01 | .25956360+00 | .26405984+01 | .1.87162400+01 |
| .49218287+00 | .18600008+01 | .25913720+00 | .26632880+01 | .1.90634200+01 |
| .49392820+00 | .18609656+01 | .25872580+00 | .26862040+01 | .1.94163000+01 |
| .49567353+00 | .18619424+01 | .25832940+00 | .27093520+01 | .1.97749400+01 |
| .49741886+00 | .18629312+01 | .25794800+00 | .27327360+01 | .2.01394000+01 |
| .49916419+00 | .18639320+01 | .25758160+00 | .27563600+01 | .2.05097200+01 |
| .50090952+00 | .18649448+01 | .25723020+00 | .27802280+01 | .2.08859600+01 |
| .50265485+00 | .18659696+01 | .25689380+00 | .28043440+01 | .2.12681600+01 |
| .50439918+00 | .18670064+01 | .25657240+00 | .28287120+01 | .2.16563600+01 |
| .50614451+00 | .18680552+01 | .25626600+00 | .28533280+01 | .2.20506000+01 |
| .50788984+00 | .18691160+01 | .25597460+00 | .28781960+01 | .2.24510400+01 |
| .50963517+00 | .18701888+01 | .25569820+00 | .29033200+01 | .2.28577200+01 |
| .51138050+00 | .18712736+01 | .25543680+00 | .29287040+01 | .2.32706800+01 |
| .51312583+00 | .18723704+01 | .25519040+00 | .29543520+01 | .2.36899600+01 |
| .51487116+00 | .18734792+01 | .25495900+00 | .29802720+01 | .2.41156000+01 |
| .51661649+00 | .18745992+01 | .25474260+00 | .30064680+01 | .2.45477200+01 |
| .51836182+00 | .18757312+01 | .25454120+00 | .30329440+01 | .2.49863600+01 |
| .52010715+00 | .18768752+01 | .25435480+00 | .30597040+01 | .2.54316400+01 |
| .52185248+00 | .18780312+01 | .25418340+00 | .30867520+01 | .2.58836000+01 |
| .52359781+00 | .18791992+01 | .25402700+00 | .31140960+01 | .2.63422800+01 |
| .52534314+00 | .18803792+01 | .25388560+00 | .31417400+01 | .2.68077200+01 |
| .52708847+00 | .18815712+01 | .25375920+00 | .31696880+01 | .2.72800000+01 |
| .52883380+00 | .18827752+01 | .25364780+00 | .31979440+01 | .2.77591600+01 |
| .53057913+00 | .18839912+01 | .25355140+00 | .32265120+01 | .2.82452400+01 |
| .53232446+00 | .18852192+01 | .25347000+00 | .32553960+01 | .2.87383200+01 |
| .53406979+00 | .18864592+01 | .25340360+00 | .32846000+01 | .2.92384400+01 |
| .53581512+00 | .18877112+01 | .25335220+00 | .33141280+01 | .2.97456800+01 |
| .53756045+00 | .18889752+01 | .25331580+00 | .33439840+01 | .3.02599600+01 |
| .53930578+00 | .18902512+01 | .25329440+00 | .33741720+01 | .3.07823200+01 |
| .54105111+00 | .18915392+01 | .25328800+00 | .34046960+01 | .3.13128000+01 |
| .54279644+00 | .18928392+01 | .25329660+00 | .34355600+01 | .3.18514400+01 |
| .54454177+00 | .18941512+01 | .25332020+00 | .34667680+01 | .3.23982800+01 |
| .54628710+00 | .18954752+01 | .25335880+00 | .34983240+01 | .3.29533600+01 |
| .54803243+00 | .18968112+01 | .25341240+00 | .35302400+01 | .3.35167200+01 |
| .54977776+00 | .18981592+01 | .25348100+00 | .35625200+01 | .3.40884000+01 |
| .55152309+00 | .18995192+01 | .25356460+00 | .35951680+01 | .3.46684400+01 |
| .55326842+00 | .19008912+01 | .25366320+00 | .36281880+01 | .3.52568800+01 |
| .55501375+00 | .19022752+01 | .25377680+00 | .36615840+01 | .3.58537600+01 |
| .55675908+00 | .19036712+01 | .25390540+00 | .36953600+01 | .3.64591200+01 |
| .55850441+00 | .19050792+01 | .25404900+00 | .37295200+01 | .3.70730000+01 |
| .56024974+00 | .19065000+01 | .25420760+00 | .37640640+01 | .3.76954400+01 |
| .56199507+00 | .19079328+01 | .25438120+00 | .37989960+01 | .3.83264800+01 |
| .56374040+00 | .19093776+01 | .25457080+00 | .38343200+01 | .3.89661600+01 |
| .56548573+00 | .19108344+01 | .25477640+00 | .38700400+01 | .3.96145200+01 |
| .56723106+00 | .19123032+01 | .25499800+00 | .39061600+01 | .4.02716000+01 |
| .56897639+00 | .19137840+01 | .25523560+00 | .39426880+01 | .4.09374400+01 |
| .57072172+00 | .19152768+01 | .25548920+00 | .39796280+01 | .4.16120800+01 |
| .57246705+00 | .19167816+01 | .25575880+00 | .40169840+01 | .4.22955600+01 |
| .57421238+00 | .19182984+01 | .25604440+00 | .40547520+01 | .4.29879200+01 |
| .57595771+00 | .19198272+01 | .25634600+00 | .40929360+01 | .4.36892000+01 |
| .57770304+00 | .19213680+01 | .25666360+00 | .41315400+01 | .4.43994400+01 |
| .57944837+00 | .19229208+01 | .25699720+00 | .41705680+01 | .4.51186800+01 |
| .58119370+00 | .19244856+01 | .25734680+00 | .42100240+01 | .4.58469600+01 |
| .58293903+00 | .19260624+01 | .25771240+00 | .42500120+01 | .4.65843200+01 |
| .58468436+00 | .19276512+01 | .25809400+00 | .42905280+01 | .4.73308000+01 |
| .58642969+00 | .19292520+01 | .25849160+00 | .43315760+01 | .4.80864400+01 |
| .58817502+00 | .19308648+01 | .25890520+00 | .43731600+01 | .4.88512800+01 |
| .58992035+00 | .19324896+01 | .259334      |              |                |

TABLE 154. (Concluded)

$$M_{\infty} = 0.12499986 + 0.02$$

$$\Theta_s = .34906584 + 00$$

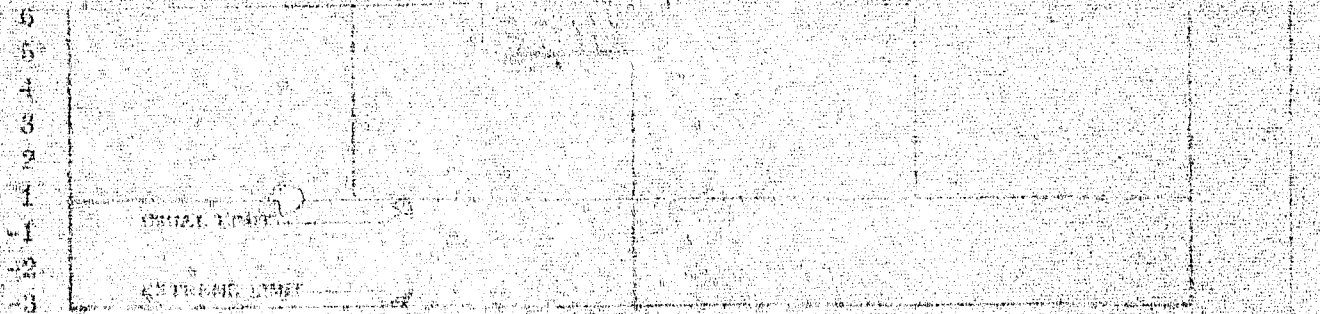
| $\theta$    | $M_1$       | $\psi_1$    | $x$         | $r$         |
|-------------|-------------|-------------|-------------|-------------|
| 40360722+00 | 18264883+01 | 29913453+00 | 17458029+01 | 74554820+00 |
| 40447987+00 | 18266391+01 | 29835695+00 | 17549179+01 | 75125217+00 |
| 40535252+00 | 18267927+01 | 29757599+00 | 17641955+01 | 75704608+00 |
| 40622517+00 | 18269489+01 | 29679352+00 | 17736408+01 | 76293270+00 |
| 40709782+00 | 18271079+01 | 29600941+00 | 17832590+01 | 76891477+00 |
| 40797047+00 | 18272696+01 | 29522353+00 | 17930558+01 | 77499530+00 |
| 40884067+00 | 18273516+01 | 29482988+00 | 17980230+01 | 77807347+00 |
| 40884312+00 | 18274342+01 | 29443574+00 | 18030369+01 | 78117742+00 |
| 40927944+00 | 18275176+01 | 29404109+00 | 18080985+01 | 78430755+00 |
| 40971577+00 | 18276017+01 | 29364591+00 | 18132085+01 | 78746435+00 |
| 41015209+00 | 18276865+01 | 29325019+00 | 18183677+01 | 79064816+00 |
| 41058842+00 | 18277720+01 | 29285390+00 | 18235769+01 | 79385947+00 |
| 41102474+00 | 18278583+01 | 29245701+00 | 18288371+01 | 79709876+00 |
| 41146107+00 | 18279453+01 | 29205954+00 | 18341490+01 | 80036645+00 |
| 41189739+00 | 18280331+01 | 29166143+00 | 18395137+01 | 80366309+00 |
| 41233372+00 | 18281217+01 | 29126268+00 | 18449319+01 | 80698906+00 |
| 41277004+00 | 18282110+01 | 29086327+00 | 18504047+01 | 81034493+00 |
| 41279072+00 | 18282152+01 | 29084432+00 | 18506654+01 | 81050473+00 |

19757473+01 = AS/R

$$.34048683+02 = P_s/P_{\infty}$$

$$37671151 \pm 01 = \rho_s / \rho_{\text{air}}$$

$$\frac{.90383922+01}{\text{---}} = T_s/T_\infty$$



## DECLARATION

RECEIVED



TABLE 155. CONICAL FLOWFIELD  $\theta_s = 20.0$  DEG;  $M_\infty = 15.0$ 

| $\underline{u}_s$    | $\underline{M}_\infty$ | $\underline{\theta}_s$ | $\underline{\theta}_w$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .91426759+00         | .14999998+02           | .34906584+00           | .41026139+00           |                 |
| $\underline{\theta}$ | $\underline{M}^*$      | $\underline{\psi}_1$   | $\underline{x}$        | $\underline{r}$ |
| .34906584+00         | .18285009+01           | .34906584+00           | .13737387+01           | .50000000+00    |
| .35037464+00         | .18285040+01           | .34776149+00           | .13799279+01           | .50429924+00    |
| .35166383+00         | .18285133+01           | .34646619+00           | .13862163+01           | .50865524+00    |
| .35299283+00         | .18285287+01           | .34517860+00           | .13926063+01           | .51306932+00    |
| .35430183+00         | .18285500+01           | .34390137+00           | .13991005+01           | .51754298+00    |
| .35561082+00         | .18285772+01           | .34263117+00           | .14057017+01           | .52207768+00    |
| .35691982+00         | .18286102+01           | .34136868+00           | .14124126+01           | .52667499+00    |
| .35822881+00         | .18286488+01           | .34011856+00           | .14192362+01           | .53133657+00    |
| .35953781+00         | .18286931+01           | .33886553+00           | .14261754+01           | .53606405+00    |
| .36084681+00         | .18287429+01           | .33762826+00           | .14332334+01           | .54086920+00    |
| .36215580+00         | .18287983+01           | .33638946+00           | .14404135+01           | .54572383+00    |
| .36346480+00         | .18288591+01           | .33516084+00           | .14477192+01           | .55065985+00    |
| .36477380+00         | .18289252+01           | .33393811+00           | .14551539+01           | .55566923+00    |
| .36608279+00         | .18289967+01           | .33272098+00           | .14627214+01           | .56075394+00    |
| .36739179+00         | .18290735+01           | .33150917+00           | .14704256+01           | .56591622+00    |
| .36870078+00         | .18291566+01           | .33030240+00           | .14782704+01           | .57115823+00    |
| .37000978+00         | .18292429+01           | .32910040+00           | .14862602+01           | .57648230+00    |
| .37131878+00         | .18293353+01           | .32790288+00           | .14943993+01           | .58189085+00    |
| .37262777+00         | .18294329+01           | .32670959+00           | .15026923+01           | .58738641+00    |
| .37393677+00         | .18295356+01           | .32552024+00           | .15111441+01           | .59297159+00    |
| .37524576+00         | .18296435+01           | .32433457+00           | .15197576+01           | .59864917+00    |
| .37655476+00         | .18297564+01           | .32315231+00           | .15285442+01           | .60442203+00    |
| .37786376+00         | .18298744+01           | .32197318+00           | .15375033+01           | .61029316+00    |
| .37917275+00         | .18299976+01           | .32079692+00           | .15466429+01           | .61626577+00    |
| .38048175+00         | .18301258+01           | .31962325+00           | .15559689+01           | .62234312+00    |
| .38179075+00         | .18302591+01           | .31845190+00           | .15654880+01           | .62852877+00    |
| .38266341+00         | .18303508+01           | .31767215+00           | .15719444+01           | .63271441+00    |
| .38353607+00         | .18304448+01           | .31689323+00           | .15784916+01           | .63695092+00    |
| .38440674+00         | .18305411+01           | .31611504+00           | .15851317+01           | .64123943+00    |
| .38528140+00         | .18306396+01           | .31533752+00           | .15918670+01           | .64558116+00    |
| .38615607+00         | .18307405+01           | .31456057+00           | .15986997+01           | .64997730+00    |
| .38702673+00         | .18308436+01           | .31378410+00           | .16056323+01           | .65442921+00    |
| .38789940+00         | .18309491+01           | .31300804+00           | .16126671+01           | .65893818+00    |
| .38877206+00         | .18310568+01           | .31223229+00           | .16198068+01           | .66350562+00    |
| .38964472+00         | .18311670+01           | .31145676+00           | .16270542+01           | .66813298+00    |
| .39051739+00         | .18312794+01           | .31068137+00           | .16344117+01           | .67282169+00    |
| .39139005+00         | .18313942+01           | .30990602+00           | .16418823+01           | .67757326+00    |
| .39226272+00         | .18315113+01           | .30913062+00           | .16494692+01           | .68238940+00    |
| .39313538+00         | .18316309+01           | .30835507+00           | .16571754+01           | .68727173+00    |
| .39400804+00         | .18317529+01           | .30757928+00           | .16650039+01           | .69222192+00    |



TABLE 155. (Concluded)

$$M_{\infty} = .14999998+02$$

$$\Theta_s = .34906584+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .39488070+00 | .18318774+01 | .30680317+00 | .16729581+01 | .69724176+00 |
| .39575335+00 | .18320046+01 | .30602663+00 | .16810416+01 | .70233312+00 |
| .39662600+00 | .18321342+01 | .30524955+00 | .16892578+01 | .70749791+00 |
| .39749865+00 | .18322663+01 | .30447182+00 | .16976107+01 | .71273819+00 |
| .39837130+00 | .18324010+01 | .30369335+00 | .17061042+01 | .71805608+00 |
| .39924395+00 | .18325382+01 | .30291401+00 | .17147424+01 | .72345374+00 |
| .40011660+00 | .18326779+01 | .30213370+00 | .17235296+01 | .72893351+00 |
| .40098925+00 | .18328202+01 | .30135230+00 | .17324703+01 | .73449771+00 |
| .40186189+00 | .18329652+01 | .30056969+00 | .17415690+01 | .74014881+00 |
| .40273454+00 | .18331129+01 | .29978576+00 | .17508307+01 | .74588942+00 |
| .40360719+00 | .18332632+01 | .29900037+00 | .17602604+01 | .75172222+00 |
| .40448352+00 | .1833394+01  | .29820710+00 | .17698400+01 | .75764411+00 |
| .40447984+00 | .18334163+01 | .29821340+00 | .17698436+01 | .75765011+00 |
| .40491617+00 | .18334938+01 | .29781928+00 | .17747320+01 | .76065066+00 |
| .40535249+00 | .18335721+01 | .29742472+00 | .17796459+01 | .76367606+00 |
| .40578882+00 | .18336510+01 | .29702969+00 | .17846060+01 | .76672673+00 |
| .40622514+00 | .18337307+01 | .29663417+00 | .17896131+01 | .76980310+00 |
| .40666147+00 | .18338111+01 | .29623817+00 | .17946680+01 | .77290560+00 |
| .40709779+00 | .18338922+01 | .29584164+00 | .17997714+01 | .77603458+00 |
| .40753412+00 | .18339740+01 | .29544458+00 | .18049242+01 | .77919052+00 |
| .40797044+00 | .18340566+01 | .29504697+00 | .18101271+01 | .78237382+00 |
| .40840676+00 | .18341399+01 | .29464878+00 | .18153812+01 | .78558498+00 |
| .40884309+00 | .18342240+01 | .29425000+00 | .18206872+01 | .78882442+00 |
| .40927941+00 | .18343088+01 | .29385060+00 | .18260460+01 | .79209268+00 |
| .40971574+00 | .18343944+01 | .29345058+00 | .18314586+01 | .79539015+00 |
| .41015206+00 | .18344808+01 | .29304990+00 | .18369261+01 | .79871751+00 |
| .41026139+00 | .18345625+01 | .29294940+00 | .18383047+01 | .79955594+00 |

$$.24283342+01 = \Delta S/R$$

$$.48446447+02 = P_s/P_{\infty}$$

$$.38840020+01 = \rho_s/\rho_{\infty}$$

$$.12473333+02 = T_s/T_{\infty}$$

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TABLE 156. CONICAL FLOWFIELD  $\theta_s = 20.0$  DEG;  $M_\infty = 17.5$

| <u>u</u><br><u>s</u> | <u>M</u><br><u>o</u> | <u>e</u><br><u>s</u> | <u>e</u><br><u>w</u> |
|----------------------|----------------------|----------------------|----------------------|
| .91631514+00         | .17500012+02         | .34906584+00         | .40872904+00         |

| <u>e</u>     | <u>M*</u><br><u>1</u> | <u>ψ</u><br><u>1</u> | <u>x</u>     | <u>r</u>     |
|--------------|-----------------------|----------------------|--------------|--------------|
| .34906584+00 | .18325959+01          | .34906584+00         | .13737387+01 | .50000000+00 |
| .35037484+00 | .18325990+01          | .34776149+00         | .13800302+01 | .50433664+00 |
| .35168383+00 | .18326084+01          | .34646619+00         | .13864240+01 | .50873146+00 |
| .35299283+00 | .18326237+01          | .34517857+00         | .13929226+01 | .51318585+00 |
| .35430183+00 | .18326451+01          | .34390130+00         | .13995287+01 | .51770135+00 |
| .35561082+00 | .18326723+01          | .34263102+00         | .14062451+01 | .52227950+00 |
| .35691982+00 | .18327053+01          | .34136841+00         | .14130748+01 | .52692192+00 |
| .35822881+00 | .18327441+01          | .34011315+00         | .14200208+01 | .53163034+00 |
| .35953781+00 | .18327885+01          | .33886491+00         | .14270864+01 | .53640649+00 |
| .36084681+00 | .18328385+01          | .33762338+00         | .14342747+01 | .54125216+00 |
| .36215580+00 | .18328939+01          | .33638827+00         | .14415893+01 | .54616930+00 |
| .36346480+00 | .18329549+01          | .33515926+00         | .14490338+01 | .55115988+00 |
| .36477380+00 | .18330212+01          | .33393607+00         | .14566119+01 | .55622595+00 |
| .36608279+00 | .18330929+01          | .33271839+00         | .14643273+01 | .56136960+00 |
| .36739179+00 | .18331699+01          | .33150595+00         | .14721845+01 | .56659319+00 |
| .36870078+00 | .18332522+01          | .33029846+00         | .14801876+01 | .57189895+00 |
| .37000978+00 | .18333397+01          | .32909563+00         | .14883409+01 | .57728935+00 |
| .37131878+00 | .18334325+01          | .32789718+00         | .14966492+01 | .58276691+00 |
| .37262777+00 | .18335304+01          | .32670284+00         | .15051173+01 | .58833431+00 |
| .37393677+00 | .18336335+01          | .32551232+00         | .15137503+01 | .59399427+00 |
| .37524576+00 | .18337417+01          | .32432535+00         | .15225536+01 | .59974977+00 |
| .37655476+00 | .18338550+01          | .32314164+00         | .15315328+01 | .60560379+00 |
| .37786376+00 | .18339735+01          | .32196093+00         | .15406937+01 | .61155956+00 |
| .37917275+00 | .18340972+01          | .32078292+00         | .15500427+01 | .61762042+00 |
| .38048175+00 | .18342259+01          | .31960735+00         | .15595858+01 | .62378976+00 |
| .38179075+00 | .18343598+01          | .31843392+00         | .15693303+01 | .63007143+00 |
| .38266341+00 | .18344919+01          | .31726526+00         | .15759419+01 | .63432343+00 |
| .38353607+00 | .18346433+01          | .31687219+00         | .15826484+01 | .63862825+00 |
| .38440874+00 | .18346431+01          | .31609235+00         | .15894519+01 | .64298709+00 |
| .38528140+00 | .18347421+01          | .31531307+00         | .15963550+01 | .64740124+00 |
| .38615407+00 | .18348434+01          | .31453428+00         | .16033599+01 | .65187197+00 |
| .38702673+00 | .18349471+01          | .31375588+00         | .16104694+01 | .65640074+00 |
| .38789940+00 | .18350531+01          | .31297778+00         | .16176860+01 | .66098892+00 |
| .38877206+00 | .18351615+01          | .31219988+00         | .16250126+01 | .66563799+00 |
| .38964472+00 | .18352722+01          | .31142211+00         | .16324518+01 | .67034947+00 |
| .39051739+00 | .18353853+01          | .31064435+00         | .16400069+01 | .67512498+00 |
| .39139005+00 | .18355008+01          | .30986682+00         | .16476806+01 | .67996607+00 |
| .39226272+00 | .18356186+01          | .30908852+00         | .16554763+01 | .68487455+00 |
| .39313538+00 | .18357389+01          | .30831024+00         | .16633974+01 | .68985217+00 |
| .39400803+00 | .18358620+01          | .30753169+00         | .16714472+01 | .69490069+00 |

TABLE 156. (Concluded)

$$M_{\infty} = .17500012+02$$

$$\Theta_s = .34906584+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .39488068+00 | .18359876+01 | .30675254+00 | .16796293+01 | .70002208+00 |
| .39575333+00 | .18361156+01 | .30597287+00 | .16879476+01 | .70521838+00 |
| .39662598+00 | .18362462+01 | .30519251+00 | .16964060+01 | .71049169+00 |
| .39749863+00 | .18363793+01 | .30441135+00 | .17050085+01 | .71584411+00 |
| .39837128+00 | .18365149+01 | .30362928+00 | .17137595+01 | .72127797+00 |
| .39924392+00 | .18366532+01 | .30284619+00 | .17226633+01 | .72679558+00 |
| .40011657+00 | .18367940+01 | .30206195+00 | .17317248+01 | .73239946+00 |
| .40098922+00 | .18369375+01 | .30127644+00 | .17409485+01 | .73809211+00 |
| .40186187+00 | .18370837+01 | .30048954+00 | .17503397+01 | .74387625+00 |
| .40273452+00 | .18372326+01 | .29970112+00 | .17599037+01 | .74975466+00 |
| .40360717+00 | .18373843+01 | .29891104+00 | .17696460+01 | .75573032+00 |
| .40449350+00 | .18375392+01 | .29811916+00 | .17795726+01 | .76180635+00 |
| .40537982+00 | .18376971+01 | .2973251+00  | .17896069+01 | .76798297+00 |
| .40627114+00 | .18378581+01 | .29652896+00 | .18000034+01 | .77427246+00 |
| .40716746+00 | .18380222+01 | .29573133+00 | .18105207+01 | .78066947+00 |
| .40806878+00 | .18381895+01 | .29493080+00 | .18212488+01 | .78718078+00 |
| .40897510+00 | .18383601+01 | .29412637+00 | .18321879+01 | .79380706+00 |
| .40988642+00 | .18385340+01 | .29331804+00 | .18433381+01 | .80054837+00 |
| .41080274+00 | .18387112+01 | .29250581+00 | .18547004+01 | .80740476+00 |
| .41172406+00 | .18388917+01 | .29168968+00 | .18662757+01 | .81437628+00 |
| .41265038+00 | .18390755+01 | .29086965+00 | .18780640+01 | .82146298+00 |
| .41358170+00 | .18392626+01 | .29004572+00 | .18900663+01 | .82866482+00 |
| .41451802+00 | .18394530+01 | .28921789+00 | .19022926+01 | .83598186+00 |
| .41545934+00 | .18396467+01 | .28838616+00 | .19147339+01 | .84341415+00 |
| .41640566+00 | .18398437+01 | .28755053+00 | .19273902+01 | .85096174+00 |
| .41735698+00 | .18400440+01 | .28671100+00 | .19402625+01 | .85862468+00 |
| .41831330+00 | .18402476+01 | .28586757+00 | .19533508+01 | .86640302+00 |
| .41927462+00 | .18404545+01 | .28502024+00 | .19666551+01 | .87429681+00 |
| .42024094+00 | .18406647+01 | .28416901+00 | .19801854+01 | .88230611+00 |
| .42121226+00 | .18408782+01 | .28331388+00 | .19939317+01 | .89043098+00 |
| .42218858+00 | .18410950+01 | .28245485+00 | .20078940+01 | .89867148+00 |
| .42316990+00 | .18413151+01 | .28159192+00 | .20220723+01 | .90702767+00 |
| .42415622+00 | .18415385+01 | .28072509+00 | .20364666+01 | .91549961+00 |
| .42514754+00 | .18417652+01 | .27985436+00 | .20510769+01 | .92408736+00 |
| .42614386+00 | .18419952+01 | .27897973+00 | .20659032+01 | .93279098+00 |
| .42714518+00 | .18422285+01 | .27810120+00 | .20809455+01 | .94161054+00 |
| .42815150+00 | .18424651+01 | .27721877+00 | .20962038+01 | .95054611+00 |
| .42916282+00 | .18427050+01 | .27633244+00 | .21116781+01 | .95959676+00 |
| .43017914+00 | .18429482+01 | .27544221+00 | .21273684+01 | .96876256+00 |
| .43120046+00 | .18431947+01 | .27454808+00 | .21432747+01 | .97804357+00 |
| .43222678+00 | .18434445+01 | .27365005+00 | .21593970+01 | .98743986+00 |
| .43325810+00 | .18436976+01 | .27274812+00 | .21757353+01 | .99695150+00 |
| .43429442+00 | .18439540+01 | .27184229+00 | .21922896+01 | .10061866+01 |
| .43533574+00 | .18442137+01 | .27093256+00 | .22090609+01 | .10230141+01 |
| .43638206+00 | .18444767+01 | .27001893+00 | .22260492+01 | .10400084+01 |
| .43743338+00 | .18447430+01 | .26910140+00 | .22432545+01 | .10571694+01 |
| .43848970+00 | .18450126+01 | .26818007+00 | .22606768+01 | .10744978+01 |
| .43955102+00 | .18452855+01 | .26725494+00 | .22783161+01 | .10919944+01 |
| .44061734+00 | .18455617+01 | .26632601+00 | .22961724+01 | .11096599+01 |
| .44168866+00 | .18458412+01 | .26539328+00 | .23142457+01 | .11274951+01 |
| .44276498+00 | .18461240+01 | .26445675+00 | .23325360+01 | .11454998+01 |
| .44384630+00 | .18464101+01 | .26351642+00 | .23510433+01 | .11636748+01 |
| .44493262+00 | .18467005+01 | .26257229+00 | .23697676+01 | .11819199+01 |
| .44602394+00 | .18469942+01 | .26162436+00 | .23887089+01 | .12003359+01 |
| .44712026+00 | .18472912+01 | .26067263+00 | .24078672+01 | .12189236+01 |
| .44822158+00 | .18475915+01 | .25971710+00 | .24272425+01 | .12376838+01 |
| .44932790+00 | .18478951+01 | .25875777+00 | .24468348+01 | .12566163+01 |
| .45043922+00 | .18482020+01 | .25779464+00 | .24666441+01 | .12757210+01 |
| .45155554+00 | .18485122+01 | .25682771+00 | .24866704+01 | .12949978+01 |
| .45267686+00 | .18488257+01 | .25585708+00 | .25069137+01 | .13144466+01 |
| .45380318+00 | .18491425+01 | .25488275+00 | .25273740+01 | .13340673+01 |
| .45493450+00 | .18494626+01 | .25390472+00 | .25480513+01 | .13538608+01 |
| .45607082+00 | .18497860+01 | .25292299+00 | .25689456+01 | .13738270+01 |
| .45721214+00 | .18501127+01 | .25193756+00 | .25899569+01 | .13939659+01 |
| .45835846+00 | .18504427+01 | .25094843+00 | .26111852+01 | .14142774+01 |
| .45950978+00 | .18507760+01 | .24995560+00 | .26326305+01 | .14347615+01 |
| .46066610+00 | .18511126+01 | .24895907+00 | .26542928+01 | .14554181+01 |
| .46182742+00 | .18514525+01 | .24795884+00 | .26761721+01 | .14762472+01 |
| .46299374+00 | .18517957+01 | .24695491+00 | .26982684+01 | .14972487+01 |
| .46416506+00 | .18521422+01 | .24594728+00 | .27205817+01 | .15184226+01 |
| .46534138+00 | .18524920+01 | .24493595+00 | .27431120+01 | .15397689+01 |
| .46652270+00 | .18528451+01 | .24392092+00 | .27658593+01 | .15612874+01 |
| .46770902+00 | .18532015+01 | .24290229+00 | .27888236+01 | .15829781+01 |
| .46889534+00 | .18535612+01 | .24187996+00 | .28120049+01 | .16048410+01 |
| .47008666+00 | .18539242+01 | .24085393+00 | .28354032+01 | .16268761+01 |
| .47128298+00 | .18542905+01 | .23982420+00 | .28590185+01 | .16490834+01 |
| .47248430+00 | .18546601+01 | .23879077+00 | .28828508+01 | .16714639+01 |
| .47369062+00 | .18550330+01 | .23775364+00 | .29068991+01 | .16940176+01 |
| .47490194+00 | .18554092+01 | .23671281+00 | .29311634+01 | .17167445+01 |
| .47611826+00 | .18557887+01 | .23566828+00 | .29556437+01 | .17396446+01 |
| .47733958+00 | .18561715+01 | .23461995+00 | .29803390+01 | .17627179+01 |
| .47856590+00 | .18565576+01 | .23356782+00 | .30052503+01 | .17859644+01 |
| .47979722+00 | .18569470+01 | .23251189+00 | .30303776+01 | .18093841+01 |
| .48103354+00 | .18573397+01 | .23145216+00 | .30557209+01 | .18329770+01 |
| .48227486+00 | .18577357+01 | .23038863+00 | .30812802+01 | .18567431+01 |
| .48352118+00 | .18581350+01 | .22932130+00 | .31070555+01 | .18806824+01 |
| .48477250+00 | .18585385+01 | .22825017+00 | .31330468+01 | .19047949+01 |
| .48602882+00 | .18589462+01 | .22717524+00 | .31592541+01 | .19290806+01 |
| .48729014+00 | .18593581+01 | .22609651+00 | .31856774+01 | .19535395+01 |
| .48855646+00 | .18597742+01 | .22501398+00 | .32123167+01 | .19781716+01 |
| .48982778+00 | .18601945+01 | .22392755+00 | .32391720+01 | .19929769+01 |
| .49110410+00 | .18606190+01 | .22283722+00 | .32662433+01 | .20079554+01 |
| .49238542+00 | .18610477+01 | .22174309+00 | .32935306+01 | .20231071+01 |
| .49367174+00 | .18614805+01 | .22064516+00 | .33210339+01 | .20384320+01 |
| .49496306+00 | .18619174+01 | .21954343+00 | .33487532+01 | .20539291+01 |
| .49625938+00 | .18623584+01 | .21843790+00 | .33766885+01 | .20695984+01 |
| .49756070+00 | .18628035+01 | .21732857+00 | .34048398+01 | .20854399+01 |
| .49886702+00 | .18632527+01 | .21621544+00 | .34332071+01 | .21014536+01 |
| .50017834+00 | .18637060+01 | .21510851+00 | .34617904+01 | .21176395+01 |
| .50149466+00 | .18641634+01 | .21400778+00 | .34905897+01 | .21339976+01 |
| .50281598+00 | .18646249+01 | .21290325+00 | .35196050+01 | .21505279+01 |
| .50414230+00 | .18650905+01 | .21179492+00 | .35488363+01 | .21672304+01 |
| .50547362+00 | .18655602+01 | .21068279+00 | .35782836+01 | .21841051+01 |
| .50680994+00 | .18660340+01 | .20956686+00 | .36079469+01 | .22011520+01 |
| .50814626+00 | .18665119+01 | .20844713+00 | .36378262+01 | .22183721+01 |
| .50948758+00 | .18669939+01 | .20732360+00 | .36679215+01 | .22357654+01 |
| .51083390+00 | .18674800+01 | .20619627+00 | .36982328+01 | .22533329+01 |
| .51218522+00 | .18679702+01 | .20506514+00 | .37287591+01 | .22710746+01 |
| .51354154+00 | .18684645+01 | .20393021+00 | .37595004+01 | .22889905+01 |
| .51490286+00 | .18689629+01 | .20279148+00 | .37904567+01 | .23070806+01 |
| .51626918+00 | .18694654+01 | .20164895+00 | .38216280+01 | .23253449+01 |
| .51764050+00 | .18699720+01 | .20050262+00 | .38530143+01 | .23437834+01 |
| .51901682+00 | .18704827+01 | .19935249+00 | .38846156+01 | .23623961+01 |
| .52039814+00 | .18709974+01 | .19819856+00 | .39164319+01 | .23811830+01 |
| .52178446+00 | .18715161+01 | .19704083+00 | .39484632+01 | .24001441+01 |
| .52317578+00 | .18720389+01 | .19587930+00 | .39807095+01 | .24192794+01 |
| .52457210+00 | .18725657+01 | .19471397+00 | .40131708+01 | .24385889+01 |
| .52597342+00 | .18730965+01 | .19354484+00 | .40458471+01 | .24580726+01 |
| .52737974+00 | .18736313+01 | .19237191+00 | .40787384+01 | .24777305+01 |
| .52879106+00 | .18741701+01 | .19119518+00 | .41118447+01 | .24975626+01 |
| .53020738+00 | .18747130+01 | .19001465+00 | .41451660+01 | .25175689+01 |
| .53162870+00 | .18752600+01 | .18883032+00 | .41787023+01 | .25377494+01 |
| .53305502+00 | .18758111+01 | .18764219+00 | .42124536+01 | .25580941+01 |
| .53448634+00 | .18763662+01 | .18645026+00 | .42464199+01 | .25786030+01 |
| .53592266+00 | .18769254+01 | .18525453+00 | .42805912+01 | .25992761+01 |
| .53736398+00 | .18774886+01 | .18405500+00 | .43149675+01 | .26201134+01 |
| .53881030+00 | .18780558+01 | .18285167+00 | .43495488+01 | .26411149+01 |
| .54026162+00 | .18786270+01 | .18164454+00 | .43843351+01 | .26622806+01 |
| .54171794+00 | .18792022+01 | .18043361+00 | .44193264+01 | .26836115+01 |
| .54317926+00 | .18797814+01 | .17921888+00 | .44545227+01 | .27051076+01 |
| .54464558+00 | .18803646+01 | .17800035+00 | .44899240+01 | .27267689+01 |
| .54611690+00 | .18809518+01 | .17677802+00 | .45255303+01 | .27485954+01 |
| .54759322+00 | .18815430+01 | .17555189+00 | .45613416+01 | .27705871+01 |
| .54907454+00 | .18821382+01 | .17432196+00 | .45973579+01 | .27927440+01 |
| .55056086+00 | .18827374+01 | .17308823+00 | .46335792+01 | .28150661+01 |
| .55205218+00 | .18833406+01 | .17185070+00 | .46699055+01 | .28375534+01 |
| .55354850+00 | .18839478+01 | .17060937+00 | .47064368+01 | .28602059+01 |
| .55504982+00 | .18845590+01 | .16936424+00 | .47431731+01 | .28830236+01 |
| .55655614+00 | .18851742+01 | .16811531+00 | .47801144+01 | .29060065+01 |
| .55806746+00 | .18857934+01 | .16686258+00 | .48172607+01 | .29291546+01 |
| .55958378+00 | .18864166+01 | .16560605+00 | .48546120+01 | .29524679+01 |
| .56110510+00 | .18870438+01 | .16434572+00 | .48921683+01 | .29759464+01 |
| .56263142+00 | .18876750+01 | .16308159+00 | .49299296+01 |              |

TABLE 157. CONICAL FLOWFIELD  $\theta_s = 20.0$  DEG;  $M_\infty = 20.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .91765105+00 | .19999983+02 | .34906584+00 | .40773150+00 |              |
| $\theta$     | $M^*_1$      | $\psi_1$     | $x$          | $r$          |
| .34906584+00 | .18352677+01 | .34906584+00 | .13737387+01 | .50000000+00 |
| .35037484+00 | .18352708+01 | .34776149+00 | .13800989+01 | .50436176+00 |
| .35168383+00 | .18352801+01 | .34646618+00 | .13865635+01 | .50878266+00 |
| .35299283+00 | .18352955+01 | .34517955+00 | .13931350+01 | .51326413+00 |
| .35430183+00 | .18353169+01 | .34390124+00 | .13998163+01 | .51780774+00 |
| .35561082+00 | .18353442+01 | .34263692+00 | .14066102+01 | .52241510+00 |
| .35691982+00 | .18353773+01 | .34136823+00 | .14135198+01 | .52708786+00 |
| .35822881+00 | .18354161+01 | .34011286+00 | .14205483+01 | .53182761+00 |
| .35953781+00 | .18354606+01 | .33886449+00 | .14276988+01 | .53663668+00 |
| .36084681+00 | .18355106+01 | .33762279+00 | .14349749+01 | .54151638+00 |
| .36215580+00 | .18355662+01 | .33638746+00 | .14423801+01 | .54646889+00 |
| .36346480+00 | .18356273+01 | .33515819+00 | .14499180+01 | .55149622+00 |
| .36477380+00 | .18356937+01 | .33393468+00 | .14575927+01 | .55660051+00 |
| .36608279+00 | .18357655+01 | .33271664+00 | .14654081+01 | .56178394+00 |
| .36739179+00 | .18358427+01 | .33150377+00 | .14733685+01 | .56704086+00 |
| .36870078+00 | .18359251+01 | .33029579+00 | .14814783+01 | .57239766+00 |
| .37000978+00 | .18360128+01 | .32909239+00 | .14897421+01 | .57783285+00 |
| .37131878+00 | .18361057+01 | .32789331+00 | .14981648+01 | .58335705+00 |
| .37262777+00 | .18362039+01 | .32669825+00 | .15067514+01 | .58897304+00 |
| .37393677+00 | .18363072+01 | .32550693+00 | .15155070+01 | .59468362+00 |
| .37524576+00 | .18364156+01 | .32431807+00 | .15244375+01 | .60049187+00 |
| .37655476+00 | .18365293+01 | .32313439+00 | .15335486+01 | .60640088+00 |
| .37786376+00 | .18366481+01 | .32195259+00 | .15428463+01 | .61241399+00 |
| .37917275+00 | .18367720+01 | .32077340+00 | .15523371+01 | .61853464+00 |
| .38048175+00 | .18369011+01 | .31959652+00 | .15620277+01 | .62476645+00 |
| .38179075+00 | .18370354+01 | .31842167+00 | .15719254+01 | .63111333+00 |
| .38266341+00 | .18371278+01 | .31763942+00 | .15786424+01 | .63541040+00 |
| .38353607+00 | .18372225+01 | .31685786+00 | .15854571+01 | .63976162+00 |
| .38440874+00 | .18373195+01 | .31607689+00 | .15923718+01 | .64416827+00 |
| .38528140+00 | .18374189+01 | .31529642+00 | .15993889+01 | .64863164+00 |
| .38615407+00 | .18375205+01 | .31451637+00 | .16065110+01 | .65315312+00 |
| .38702673+00 | .18376246+01 | .31373664+00 | .16137410+01 | .65773418+00 |
| .38789940+00 | .18377313+01 | .31295715+00 | .16210813+01 | .66237624+00 |
| .38877206+00 | .18378397+01 | .31217778+00 | .16285351+01 | .66708089+00 |
| .38964472+00 | .18379508+01 | .31139847+00 | .16361053+01 | .67184973+00 |
| .39051739+00 | .18380643+01 | .31061909+00 | .16437950+01 | .67668442+00 |
| .39139005+00 | .18381803+01 | .30983956+00 | .16516074+01 | .68158659+00 |
| .39226272+00 | .18382986+01 | .30905978+00 | .16595458+01 | .68655811+00 |
| .39313537+00 | .18384198+01 | .30827966+00 | .16676137+01 | .69160074+00 |
| .39400801+00 | .18385434+01 | .30749908+00 | .16758148+01 | .69671648+00 |

270  
300

CLASSIFICATION

REPORT NUMBER



TABLE 157. (Concluded)

$$M_{\infty} = .19999983+02$$

$$\Theta_s = .34906584+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .39488066+00 | .18386695+01 | .30671794+00 | .16841529+01 | .70190736+00 |
| .39575331+00 | .18387982+01 | .30593612+00 | .16926320+01 | .70717551+00 |
| .39662596+00 | .18389293+01 | .30515350+00 | .17012562+01 | .71252301+00 |
| .39749861+00 | .18390631+01 | .30436999+00 | .17100300+01 | .71795233+00 |
| .39837126+00 | .18391995+01 | .30358545+00 | .17189576+01 | .72346567+00 |
| .39924391+00 | .18393384+01 | .30279978+00 | .17280437+01 | .72906554+00 |
| .40011656+00 | .18394801+01 | .30201284+00 | .17372935+01 | .73475462+00 |
| .40098921+00 | .18396244+01 | .30122451+00 | .17467120+01 | .74053556+00 |
| .40186186+00 | .18397714+01 | .30043865+00 | .17563045+01 | .74641117+00 |
| .40273451+00 | .18399212+01 | .29964314+00 | .17660768+01 | .75238452+00 |
| .40360716+00 | .18400738+01 | .29884982+00 | .17760347+01 | .75845859+00 |
| .40448348+00 | .18401512+01 | .29845245+00 | .17810852+01 | .76153447+00 |
| .40447981+00 | .18402293+01 | .29805457+00 | .17861844+01 | .76463672+00 |
| .40491613+00 | .18403081+01 | .29765617+00 | .17913333+01 | .76776588+00 |
| .40535245+00 | .18403877+01 | .29725722+00 | .17965325+01 | .77092232+00 |
| .40578878+00 | .18404680+01 | .29685771+00 | .18017830+01 | .77410650+00 |
| .40622510+00 | .18405490+01 | .29645763+00 | .18070857+01 | .77731889+00 |
| .40666143+00 | .18406308+01 | .29605694+00 | .18124416+01 | .78056005+00 |
| .40709775+00 | .18407133+01 | .29565562+00 | .18178515+01 | .78383036+00 |
| .40753408+00 | .18407966+01 | .29525367+00 | .18233164+01 | .78713041+00 |
| .40773150+00 | .18408346+01 | .29507157+00 | .18258075+01 | .78863351+00 |

$$.31927336+01 = \Delta S/R$$

$$.85093087+02 = P_3/P_{\infty}$$

$$.40110974+01 = \rho_3/\rho_{\infty}$$

$$.21214468+02 = T_3/T_{\infty}$$



TABLE 158. CONICAL FLOWFIELD  $\theta_s = 20.0$  DEG;  $M_\infty = 22.5$

| $u_s$        | $M_\infty$   | $\theta_s$    | $\theta_w$   |              |
|--------------|--------------|---------------|--------------|--------------|
| .91857021+00 | .22499933+02 | .34906584+00  | .40704622+00 |              |
| $\theta$     | $M^*_1$      | $\psi_1$      | $x$          | $r$          |
| .34906584+00 | .18371060+01 | .34906584+00  | .13737387+01 | .50000000+00 |
| .35037484+00 | .18371091+01 | .34776149+00  | .13801472+01 | .50437938+00 |
| .35168383+00 | .18371184+01 | .34646618+00  | .13866614+01 | .50881856+00 |
| .35299283+00 | .18371339+01 | .34517953+00  | .13932840+01 | .51331903+00 |
| .35430183+00 | .18371553+01 | .34390120+00  | .14000180+01 | .51788236+00 |
| .35561082+00 | .18371826+01 | .34263084+00  | .14068663+01 | .52251022+00 |
| .35691982+00 | .18372157+01 | .34136811+00  | .14138320+01 | .52720427+00 |
| .35822881+00 | .18372546+01 | .34011267+00  | .14209183+01 | .53196634+00 |
| .35953781+00 | .18372991+01 | .33886419+00  | .14281286+01 | .53679821+00 |
| .36084681+00 | .18373492+01 | .33762237+00  | .14354663+01 | .54170182+00 |
| .36215580+00 | .18374048+01 | .33638689+00  | .14429351+01 | .54667918+00 |
| .36346480+00 | .18374659+01 | .33515743+00  | .14505389+01 | .55173236+00 |
| .36477380+00 | .18375325+01 | .33393370+00  | .14582816+01 | .55686355+00 |
| .36608279+00 | .18376044+01 | .33271540+00  | .14661672+01 | .56207494+00 |
| .36739179+00 | .18376816+01 | .33150223+00  | .14742002+01 | .56736895+00 |
| .36870078+00 | .18377642+01 | .33029389+00  | .14823852+01 | .57274805+00 |
| .37000978+00 | .18378520+01 | .32909010+00  | .14907269+01 | .57821481+00 |
| .37131878+00 | .18379450+01 | .32789056+00  | .14992301+01 | .58377188+00 |
| .37262777+00 | .18380433+01 | .32669500+00  | .15078902+01 | .58942211+00 |
| .37393677+00 | .18381468+01 | .32550312+00  | .15167424+01 | .59516837+00 |
| .37524576+00 | .18382554+01 | .32431463+00  | .15257625+01 | .60101380+00 |
| .37655476+00 | .18383693+01 | .32312924+00  | .15349666+01 | .60696161+00 |
| .37786376+00 | .18384883+01 | .32194668+00  | .15443609+01 | .61301520+00 |
| .37917275+00 | .18386125+01 | .32076665+00  | .15539520+01 | .61917810+00 |
| .38048175+00 | .18387418+01 | .31958885+00  | .15637468+01 | .62545402+00 |
| .38179075+00 | .18388763+01 | .31841299+00  | .15737527+01 | .63184698+00 |
| .38266341+00 | .18389689+01 | .317263003+00 | .15805443+01 | .63617592+00 |
| .38353607+00 | .18390638+01 | .31604770+00  | .15874356+01 | .64055998+00 |
| .38440874+00 | .18391611+01 | .31486593+00  | .15944289+01 | .64500045+00 |
| .38528140+00 | .18392607+01 | .31362861+00  | .16015269+01 | .64949869+00 |
| .38615407+00 | .18393626+01 | .312450367+00 | .16087321+01 | .65405613+00 |
| .38702673+00 | .18394668+01 | .311372300+00 | .16160474+01 | .65867424+00 |
| .38789940+00 | .18395735+01 | .310294251+00 | .16234756+01 | .66335456+00 |
| .38877206+00 | .18396825+01 | .31216211+00  | .16310197+01 | .66809862+00 |
| .38964472+00 | .18397939+01 | .31138169+00  | .16386828+01 | .67290817+00 |
| .39051739+00 | .18399077+01 | .31060117+00  | .16464681+01 | .67778483+00 |
| .39139005+00 | .18400240+01 | .30982044+00  | .16543788+01 | .68273032+00 |
| .39226271+00 | .18401429+01 | .30903940+00  | .16624186+01 | .68774658+00 |
| .39313536+00 | .18402644+01 | .30825795+00  | .16705910+01 | .69283548+00 |
| .39400801+00 | .18403884+01 | .30747598+00  | .16788996+01 | .69799899+00 |

TABLE 158. (Concluded)

$$M_{\infty} = .22499933+02$$

$$\Theta_s = .34906584+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .39488066+00 | .18405150+01 | .30669337+00 | .16873487+01 | .70323928+00 |
| .39575331+00 | .18406440+01 | .30591002+00 | .16959423+01 | .70855851+00 |
| .39662595+00 | .18407757+01 | .30512580+00 | .17046846+01 | .71395889+00 |
| .39749860+00 | .18409099+01 | .30434061+00 | .17135801+01 | .71944280+00 |
| .39837125+00 | .18410467+01 | .30355432+00 | .17226335+01 | .72501276+00 |
| .39924390+00 | .18411862+01 | .30276680+00 | .17318497+01 | .73067129+00 |
| .40011655+00 | .18413284+01 | .30197294+00 | .17412339+01 | .73642109+00 |
| .40098920+00 | .18414732+01 | .30118759+00 | .17507911+01 | .74226493+00 |
| .40186185+00 | .18416209+01 | .30039562+00 | .17605274+01 | .74820585+00 |
| .40273450+00 | .18417713+01 | .29960189+00 | .17704484+01 | .75424688+00 |
| .40360715+00 | .18419246+01 | .29880627+00 | .17805601+01 | .76039118+00 |
| .40447980+00 | .18420803+01 | .29800770+00 | .17908696+01 | .76664224+00 |
| .40447980+00 | .18420807+01 | .29800859+00 | .17908693+01 | .76664224+00 |
| .40491612+00 | .18421599+01 | .29760894+00 | .17961002+01 | .76980895+00 |
| .40535245+00 | .18422399+01 | .29720872+00 | .18013828+01 | .77300362+00 |
| .40578877+00 | .18423205+01 | .29680789+00 | .18067183+01 | .77622683+00 |
| .40622510+00 | .18424019+01 | .29640647+00 | .18121076+01 | .77947903+00 |
| .40666142+00 | .18424841+01 | .29600441+00 | .18175515+01 | .78276069+00 |
| .40709622+00 | .18425572+01 | .29560228+00 | .18223988+01 | .78567975+00 |

$$.35185748+01 = \Delta S/R$$

$$.10734209+03 = P_s/P_{\infty}$$

$$.40474386+01 = \rho_s/\rho_{\infty}$$

$$.26520993+02 = T_s/T_{\infty}$$

TABLE 159. CONICAL FLOWFIELD  $\theta_s = 20.0$  DEG;  $M_\infty = 25.0$ 

| $\underline{u}_s$ | $\underline{M}_\infty$ | $\underline{\theta}_s$ | $\underline{\theta}_w$ |                 |
|-------------------|------------------------|------------------------|------------------------|-----------------|
| .91922943+00      | .24999918+02           | .34906584+00           | .40655534+00           |                 |
| $\underline{e}$   | $\underline{M}_1^*$    | $\underline{\psi}_1$   | $\underline{x}$        | $\underline{r}$ |
| .34906584+00      | .18384244+01           | .34906584+00           | .13737387+01           | .50000000+00    |
| .35037484+00      | .18384275+01           | .34776149+00           | .13801821+01           | .50439215+00    |
| .35168383+00      | .18384369+01           | .34646617+00           | .13867325+01           | .50884465+00    |
| .35299283+00      | .18384523+01           | .34517952+00           | .13933924+01           | .51335894+00    |
| .35430183+00      | .18384737+01           | .34390118+00           | .14001647+01           | .51793664+00    |
| .35561082+00      | .18385011+01           | .34263079+00           | .14070525+01           | .52257939+00    |
| .35691982+00      | .18385342+01           | .34136801+00           | .14140590+01           | .52728891+00    |
| .35822881+00      | .18385731+01           | .34011252+00           | .14211874+01           | .53206706+00    |
| .35953781+00      | .18386176+01           | .33886398+00           | .14284411+01           | .53691568+00    |
| .36084681+00      | .18386678+01           | .33762207+00           | .14358238+01           | .54183672+00    |
| .36215580+00      | .18387235+01           | .33638647+00           | .14433389+01           | .54683217+00    |
| .36346480+00      | .18387846+01           | .33515688+00           | .14509907+01           | .55190420+00    |
| .36477380+00      | .18388512+01           | .33393299+00           | .14587829+01           | .55705498+00    |
| .36608279+00      | .18389232+01           | .33271449+00           | .14667198+01           | .56228678+00    |
| .36739179+00      | .18390005+01           | .33150110+00           | .14748058+01           | .56760203+00    |
| .36870078+00      | .18390831+01           | .33029251+00           | .14830457+01           | .57300323+00    |
| .37000978+00      | .18391710+01           | .32908842+00           | .14914441+01           | .57849299+00    |
| .37131878+00      | .18392642+01           | .32788856+00           | .15000061+01           | .58407402+00    |
| .37262777+00      | .18393626+01           | .32669263+00           | .15087370+01           | .58974921+00    |
| .37393677+00      | .18394662+01           | .32550032+00           | .15176424+01           | .59552152+00    |
| .37524576+00      | .18395749+01           | .32431138+00           | .15267281+01           | .60139415+00    |
| .37611843+00      | .18396504+01           | .32352046+00           | .15328883+01           | .60536651+00    |
| .37699109+00      | .18397281+01           | .32273082+00           | .15391334+01           | .60938597+00    |
| .37786376+00      | .18398081+01           | .32194236+00           | .15454650+01           | .61345347+00    |
| .37873642+00      | .18398904+01           | .32115506+00           | .15518853+01           | .61757013+00    |
| .37960909+00      | .18399750+01           | .32036866+00           | .15583963+01           | .62173704+00    |
| .38048175+00      | .18400619+01           | .31958323+00           | .15650003+01           | .62595540+00    |
| .38135441+00      | .18401512+01           | .31879865+00           | .15716994+01           | .63022641+00    |
| .38222708+00      | .18402427+01           | .31801481+00           | .15784940+01           | .63455124+00    |
| .38309974+00      | .18403366+01           | .31723163+00           | .15853924+01           | .63893125+00    |
| .38397241+00      | .18404329+01           | .31644902+00           | .15923912+01           | .64336775+00    |
| .38484507+00      | .18405314+01           | .31566688+00           | .15994948+01           | .64786205+00    |
| .38571773+00      | .18406323+01           | .31488512+00           | .16067040+01           | .65241560+00    |
| .38659040+00      | .18407356+01           | .31410366+00           | .16140275+01           | .65702986+00    |
| .38746306+00      | .18408412+01           | .31332238+00           | .16214623+01           | .66170443+00    |
| .38833573+00      | .18409493+01           | .31254121+00           | .16290132+01           | .66644683+00    |
| .38920839+00      | .18410597+01           | .31176003+00           | .16366835+01           | .67125276+00    |
| .39008106+00      | .18411725+01           | .31097875+00           | .16444762+01           | .67612585+00    |
| .39095372+00      | .18412878+01           | .31019726+00           | .16523950+01           | .68106801+00    |
| .39182638+00      | .18414057+01           | .30941549+00           | .16604430+01           | .68608092+00    |

TABLE 159. (Concluded)

$$M_{\infty} = .24999916+02$$

$$\Theta_s = .34906584+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .39269903+00 | .18415262+01 | .30863331+00 | .16686239+01 | .69116654+00 |
| .39313535+00 | .18415874+01 | .30824204+00 | .16727655+01 | .69373728+00 |
| .39357167+00 | .18416492+01 | .30785062+00 | .16769417+01 | .69632696+00 |
| .39400800+00 | .18417117+01 | .30745904+00 | .16811532+01 | .69893589+00 |
| .39444432+00 | .18417747+01 | .30706729+00 | .16854003+01 | .70156423+00 |
| .39488065+00 | .18418385+01 | .30667536+00 | .16896837+01 | .70421242+00 |
| .39531697+00 | .18419028+01 | .30628323+00 | .16940039+01 | .70688061+00 |
| .39575330+00 | .18419678+01 | .30589088+00 | .16983612+01 | .70956910+00 |
| .39618962+00 | .18420334+01 | .30549831+00 | .17027565+01 | .71227824+00 |
| .39662595+00 | .18420997+01 | .30510549+00 | .17071902+01 | .71500829+00 |
| .39706227+00 | .18421667+01 | .30471241+00 | .17116630+01 | .71775957+00 |
| .39749860+00 | .18422342+01 | .30431905+00 | .17161753+01 | .72053241+00 |
| .39793492+00 | .18423025+01 | .30392541+00 | .17207279+01 | .72332708+00 |
| .39837125+00 | .18423714+01 | .30353146+00 | .17253212+01 | .72614394+00 |
| .39880757+00 | .18424410+01 | .30313720+00 | .17299560+01 | .72898330+00 |
| .39924389+00 | .18425113+01 | .30274260+00 | .17346330+01 | .73184554+00 |
| .39968022+00 | .18425822+01 | .30234763+00 | .17393526+01 | .73473094+00 |
| .40011654+00 | .18426538+01 | .30195231+00 | .17441158+01 | .73763993+00 |
| .40055287+00 | .18427262+01 | .30155659+00 | .17489231+01 | .74057285+00 |
| .40098919+00 | .18427991+01 | .30116047+00 | .17537753+01 | .74353008+00 |
| .40142552+00 | .18428728+01 | .30076393+00 | .17586730+01 | .74651194+00 |
| .40186184+00 | .18429472+01 | .30036695+00 | .17636171+01 | .74951893+00 |
| .40229817+00 | .18430223+01 | .29996952+00 | .17686084+01 | .75255140+00 |
| .40273449+00 | .18430981+01 | .29957160+00 | .17736475+01 | .75560975+00 |
| .40317082+00 | .18431746+01 | .29917319+00 | .17787353+01 | .75869440+00 |
| .40360714+00 | .18432519+01 | .29877427+00 | .17838726+01 | .76180576+00 |
| .40404347+00 | .18433298+01 | .29837482+00 | .17890604+01 | .76494436+00 |
| .40447979+00 | .18434085+01 | .29797481+00 | .17942994+01 | .76811057+00 |
| .40491612+00 | .18434880+01 | .29757424+00 | .17995905+01 | .77130491+00 |
| .40535244+00 | .18435682+01 | .29717308+00 | .18049347+01 | .77452779+00 |
| .40578876+00 | .18436491+01 | .29677129+00 | .18103327+01 | .77777970+00 |
| .40622509+00 | .18437308+01 | .29636888+00 | .18157858+01 | .78106122+00 |
| .40665534+00 | .18437932+01 | .29606386+00 | .18199504+01 | .78356498+00 |

$$.38147405+01 = \Delta S/R$$

$$.13220831+03 = P_s/P_{\infty}$$

$$.40740054+01 = \rho_s/\rho_{\infty}$$

$$.32451677+02 = T_s/T_{\infty}$$



TABLE 160. CONICAL FLOWFIELD  $\theta_s = 20.0$  DEG;  $M_\infty = 27.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .91971797+00 | .27500012+02 | .34906584+00 | .40619178+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .34906584+00 | .18394015+01 | .34906584+00 | .13737387+01 | .50000000+00 |
| .35037484+00 | .18394046+01 | .34776149+00 | .13802084+01 | .50440176+00 |
| .35168383+00 | .18394140+01 | .34646617+00 | .13867858+01 | .50886420+00 |
| .35299283+00 | .18394294+01 | .34517951+00 | .13934735+01 | .51338883+00 |
| .35430183+00 | .18394500+01 | .34390115+00 | .14002746+01 | .51797728+00 |
| .35561082+00 | .18394782+01 | .34263075+00 | .14071921+01 | .52263123+00 |
| .35691982+00 | .18395113+01 | .34136795+00 | .14142292+01 | .52735238+00 |
| .35822881+00 | .18395502+01 | .34011241+00 | .14213892+01 | .53214262+00 |
| .35953781+00 | .18395948+01 | .33886381+00 | .14286755+01 | .53700379+00 |
| .36084681+00 | .18396450+01 | .33762183+00 | .14360918+01 | .54193787+00 |
| .36215580+00 | .18397007+01 | .33638616+00 | .14436418+01 | .54694691+00 |
| .36346480+00 | .18397619+01 | .33515646+00 | .14513294+01 | .55203305+00 |
| .36477380+00 | .18398286+01 | .33393245+00 | .14591588+01 | .55719854+00 |
| .36608279+00 | .18399006+01 | .33271381+00 | .14671341+01 | .56244560+00 |
| .36739179+00 | .18399779+01 | .33150025+00 | .14752599+01 | .56777677+00 |
| .36870078+00 | .18400606+01 | .33029146+00 | .14835409+01 | .57319456+00 |
| .37000978+00 | .18401486+01 | .32908716+00 | .14919817+01 | .57870159+00 |
| .37131878+00 | .18402418+01 | .32788705+00 | .15005880+01 | .58430063+00 |
| .37262777+00 | .18403403+01 | .32669084+00 | .15093647+01 | .58999458+00 |
| .37393677+00 | .18404439+01 | .32549823+00 | .15183175+01 | .59578644+00 |
| .37524576+00 | .18405528+01 | .32430893+00 | .15274523+01 | .60167942+00 |
| .37611843+00 | .18406283+01 | .32351776+00 | .15336464+01 | .60566588+00 |
| .37699109+00 | .18407061+01 | .32272785+00 | .15399260+01 | .60969980+00 |
| .37786376+00 | .18407862+01 | .32193910+00 | .15462932+01 | .61378221+00 |
| .37873642+00 | .18408685+01 | .32115144+00 | .15527500+01 | .61791423+00 |
| .37960909+00 | .18409533+01 | .32036477+00 | .15592985+01 | .62209696+00 |
| .38048175+00 | .18410403+01 | .31957901+00 | .15659408+01 | .62633159+00 |
| .38135441+00 | .18411296+01 | .31879406+00 | .15726794+01 | .63061935+00 |
| .38222708+00 | .18412213+01 | .31800983+00 | .15795164+01 | .63496146+00 |
| .38309974+00 | .18413153+01 | .31722625+00 | .15864544+01 | .63935926+00 |
| .38397241+00 | .18414116+01 | .31644320+00 | .15934958+01 | .64381405+00 |
| .38484507+00 | .18415103+01 | .31566061+00 | .16006434+01 | .64832726+00 |
| .38571773+00 | .18416113+01 | .31487837+00 | .16078996+01 | .65290027+00 |
| .38659040+00 | .18417147+01 | .31409640+00 | .16152675+01 | .65753466+00 |
| .38746306+00 | .18418205+01 | .31331459+00 | .16227500+01 | .66223195+00 |
| .38833573+00 | .18419287+01 | .31253285+00 | .16303501+01 | .66699376+00 |
| .38920839+00 | .18420393+01 | .31175108+00 | .16380709+01 | .67182178+00 |
| .39008106+00 | .18421523+01 | .31096918+00 | .16459157+01 | .67671767+00 |
| .39095372+00 | .18422677+01 | .31018705+00 | .16538879+01 | .68168333+00 |
| .39182638+00 | .18423856+01 | .30940458+00 | .16619910+01 | .68672053+00 |



TABLE 160. (Concluded)

$$M_{\infty} = .27500012+02$$

$$\Theta_s = .34906584+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .39269903+00 | .18425065+01 | .30862169+00 | .16702288+01 | .69183129+00 |
| .39313535+00 | .18425679+01 | .30823005+00 | .16743993+01 | .69441488+00 |
| .39357167+00 | .18426298+01 | .30783824+00 | .16785051+01 | .69701767+00 |
| .39400800+00 | .18426923+01 | .30744627+00 | .16828465+01 | .69963988+00 |
| .39444432+00 | .18427555+01 | .30705413+00 | .16871241+01 | .70228179+00 |
| .39488065+00 | .18428194+01 | .30666179+00 | .16914384+01 | .70494373+00 |
| .39531697+00 | .18428839+01 | .30626924+00 | .16957899+01 | .70762589+00 |
| .39575330+00 | .18429490+01 | .30587646+00 | .17001792+01 | .71032864+00 |
| .39618962+00 | .18430147+01 | .30548345+00 | .17046069+01 | .71305229+00 |
| .39662595+00 | .18430811+01 | .30509018+00 | .17090736+01 | .71579707+00 |
| .39706227+00 | .18431482+01 | .30469664+00 | .17135797+01 | .71856335+00 |
| .39749860+00 | .18432159+01 | .30430282+00 | .17181261+01 | .72135145+00 |
| .39793492+00 | .18432843+01 | .30390869+00 | .17227132+01 | .72416166+00 |
| .39837125+00 | .18433534+01 | .30351425+00 | .17273418+01 | .72699435+00 |
| .39880757+00 | .18434231+01 | .30311948+00 | .17320124+01 | .72984982+00 |
| .39924389+00 | .18434935+01 | .30272436+00 | .17367257+01 | .73272847+00 |
| .39968022+00 | .18435646+01 | .30232887+00 | .17414823+01 | .73563055+00 |
| .40011654+00 | .18436364+01 | .30193300+00 | .17462831+01 | .73855656+00 |
| .40055287+00 | .18437088+01 | .30153673+00 | .17511287+01 | .74150679+00 |
| .40098919+00 | .18437820+01 | .30114004+00 | .17560197+01 | .74448161+00 |
| .40142552+00 | .18438558+01 | .30074292+00 | .17609570+01 | .74748145+00 |
| .40186184+00 | .18439304+01 | .30034535+00 | .17659415+01 | .75050676+00 |
| .40229817+00 | .18440057+01 | .29994730+00 | .17709738+01 | .75355789+00 |
| .40273449+00 | .18440816+01 | .29954877+00 | .17760546+01 | .75663522+00 |
| .40317082+00 | .18441583+01 | .29914973+00 | .17811849+01 | .75973924+00 |
| .40360714+00 | .18442358+01 | .29875015+00 | .17863655+01 | .76287036+00 |
| .40404347+00 | .18443139+01 | .29835004+00 | .17915973+01 | .76602907+00 |
| .40447979+00 | .18443928+01 | .29794935+00 | .17968812+01 | .76921581+00 |
| .40491612+00 | .18444725+01 | .29754807+00 | .18022180+01 | .77243105+00 |
| .40535244+00 | .18445529+01 | .29714619+00 | .18076088+01 | .77567529+00 |
| .40578876+00 | .18446340+01 | .29674368+00 | .18130543+01 | .77894899+00 |
| .40622508+00 | .18447097+01 | .29634132+00 | .18185537+01 | .78224939+00 |

$$.40858132+01 = \Delta S/R$$

$$.15969364+03 = P_s/P_{\infty}$$

$$.40939863+01 = \rho_s/\rho_{\infty}$$

$$.39006882+02 = T_s/T_{\infty}$$

/ TABLE 161. CONICAL FLOWFIELD  $\theta_s = 20.0$  DEG;  $M_\infty = 30.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .92009010+00 | .29999890+02 | .34906664+00 | .40591503+00 |              |
| $\theta$     | $M^*_1$      | $\psi_1$     | $x$          | $r$          |
| .34906584+00 | .18401457+01 | .34906584+00 | .13737387+01 | .50000000+00 |
| .35037484+00 | .18401489+01 | .34776149+00 | .13802286+01 | .50440913+00 |
| .35168383+00 | .18401582+01 | .34646617+00 | .13868266+01 | .50887921+00 |
| .35299283+00 | .18401736+01 | .34517951+00 | .13935358+01 | .51341177+00 |
| .35430183+00 | .18401951+01 | .34390114+00 | .14003589+01 | .51800848+00 |
| .35561082+00 | .18402224+01 | .34263071+00 | .14072992+01 | .52267100+00 |
| .35691982+00 | .18402556+01 | .34136789+00 | .14143598+01 | .52740107+00 |
| .35822881+00 | .18402945+01 | .34011232+00 | .14215440+01 | .53220097+00 |
| .35953781+00 | .18403391+01 | .33886369+00 | .14288554+01 | .53707139+00 |
| .36084681+00 | .18403893+01 | .33762166+00 | .14362975+01 | .54201549+00 |
| .36215580+00 | .18404451+01 | .33638591+00 | .14438742+01 | .54703496+00 |
| .36346480+00 | .18405063+01 | .33515614+00 | .14515895+01 | .55213196+00 |
| .36477380+00 | .18405730+01 | .33393203+00 | .14594474+01 | .55730873+00 |
| .36608279+00 | .18406450+01 | .33271328+00 | .14674522+01 | .56256756+00 |
| .36739179+00 | .18407225+01 | .33149960+00 | .14756086+01 | .56791098+00 |
| .36870078+00 | .18408052+01 | .33029066+00 | .14839212+01 | .57334150+00 |
| .37000978+00 | .18408932+01 | .32908619+00 | .14923949+01 | .57886179+00 |
| .37131878+00 | .18409865+01 | .32788589+00 | .15010350+01 | .58447467+00 |
| .37262777+00 | .18410850+01 | .32668946+00 | .15098469+01 | .59018303+00 |
| .37393677+00 | .18411887+01 | .32549661+00 | .15188361+01 | .59598992+00 |
| .37524576+00 | .18412977+01 | .32430704+00 | .15280087+01 | .60189860+00 |
| .37611843+00 | .18413732+01 | .32351568+00 | .15342288+01 | .60589589+00 |
| .37699109+00 | .18414510+01 | .32272556+00 | .15405351+01 | .60994096+00 |
| .37786376+00 | .18415312+01 | .32193660+00 | .15469297+01 | .61403485+00 |
| .37873642+00 | .18416136+01 | .32114670+00 | .15534146+01 | .61817868+00 |
| .37960909+00 | .18416984+01 | .32036178+00 | .15599918+01 | .62237357+00 |
| .38048175+00 | .18417855+01 | .31957575+00 | .15666637+01 | .62662072+00 |
| .38135441+00 | .18418749+01 | .31879052+00 | .15734326+01 | .63092137+00 |
| .38222708+00 | .18419666+01 | .31800600+00 | .15803008+01 | .63527679+00 |
| .38309974+00 | .18420607+01 | .31722210+00 | .15872707+01 | .63968823+00 |
| .38397241+00 | .18421571+01 | .31643872+00 | .15943451+01 | .64415716+00 |
| .38484507+00 | .18422559+01 | .31565578+00 | .16015264+01 | .64868491+00 |
| .38571773+00 | .18423570+01 | .31487817+00 | .16088174+01 | .65327296+00 |
| .38659040+00 | .18424605+01 | .31409080+00 | .16162211+01 | .65792281+00 |
| .38746306+00 | .18425664+01 | .31330859+00 | .16237403+01 | .66263608+00 |
| .38833573+00 | .18426747+01 | .31252641+00 | .16313762+01 | .66741438+00 |
| .38920839+00 | .18427854+01 | .31174419+00 | .16391380+01 | .67225941+00 |
| .39008106+00 | .18428985+01 | .31096181+00 | .16470228+01 | .67717288+00 |
| .39095372+00 | .18430141+01 | .31017917+00 | .16550363+01 | .68215668+00 |
| .39182637+00 | .18431325+01 | .30939619+00 | .16631818+01 | .68721257+00 |

TABLE 161. (Concluded)

$$M_{\infty} = .29999890+02$$

$$\Theta_s = .34906584+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .39269902+00 | .18432533+01 | .30861274+00 | .16714635+01 | .69234271+00 |
| .39313534+00 | .18433147+01 | .30822081+00 | .16756566+01 | .69493627+00 |
| .39357167+00 | .18433767+01 | .30782871+00 | .16798851+01 | .69754916+00 |
| .39400799+00 | .18434393+01 | .30743644+00 | .16841497+01 | .70018166+00 |
| .39444432+00 | .18435026+01 | .30704398+00 | .16884508+01 | .70283403+00 |
| .39488064+00 | .18435665+01 | .30665132+00 | .16927890+01 | .70550659+00 |
| .39531697+00 | .18436311+01 | .30625845+00 | .16971647+01 | .70819958+00 |
| .39575329+00 | .18436963+01 | .30586534+00 | .17015786+01 | .71091331+00 |
| .39618962+00 | .18437621+01 | .30547198+00 | .17060314+01 | .71364816+00 |
| .39662594+00 | .18438286+01 | .30507837+00 | .17105235+01 | .71640434+00 |
| .39706226+00 | .18438958+01 | .30468447+00 | .17150556+01 | .71918223+00 |
| .39749859+00 | .18439637+01 | .30429028+00 | .17196283+01 | .72198213+00 |
| .39793491+00 | .18440321+01 | .30389578+00 | .17242422+01 | .72480437+00 |
| .39837124+00 | .18441013+01 | .30350096+00 | .17288979+01 | .72764926+00 |
| .39880756+00 | .18441711+01 | .30310580+00 | .17335961+01 | .73051715+00 |
| .39924389+00 | .18442416+01 | .30271028+00 | .17383374+01 | .73340844+00 |
| .39968021+00 | .18443128+01 | .30231438+00 | .17431227+01 | .73632348+00 |
| .40011654+00 | .18443847+01 | .30191809+00 | .17479525+01 | .73926257+00 |
| .40055286+00 | .18444573+01 | .30152139+00 | .17528276+01 | .74222619+00 |
| .40098919+00 | .18445306+01 | .30112427+00 | .17577489+01 | .74521473+00 |
| .40142551+00 | .18446045+01 | .30072670+00 | .17627168+01 | .74822845+00 |
| .40186184+00 | .18446792+01 | .30032866+00 | .17677324+01 | .75126788+00 |
| .40229816+00 | .18447546+01 | .29993015+00 | .17727963+01 | .75433337+00 |
| .40273448+00 | .18448307+01 | .29953113+00 | .17779094+01 | .75742538+00 |
| .40317081+00 | .18449076+01 | .29913159+00 | .17830727+01 | .76054441+00 |
| .40360713+00 | .18449851+01 | .29873152+00 | .17882867+01 | .76369078+00 |
| .40404346+00 | .18450635+01 | .29833089+00 | .17935525+01 | .76686504+00 |
| .40447978+00 | .18451425+01 | .29792967+00 | .17988711+01 | .77006762+00 |
| .40491611+00 | .18452223+01 | .29752785+00 | .18042432+01 | .77329904+00 |
| .40535243+00 | .18453028+01 | .29712542+00 | .18096699+01 | .77655972+00 |
| .40578876+00 | .18453842+01 | .29672234+00 | .18151520+01 | .77985021+00 |
| .40591503+00 | .18454076+01 | .29660556+00 | .18167492+01 | .78080619+00 |

$$.43354487+01 = \Delta S/R$$

$$.18979358+03 = P_g/P_{\infty}$$

$$.41093622+01 = \rho_g/\rho_{\infty}$$

$$.46185657+02 = T_g/T_{\infty}$$

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TABLE 162. CONICAL FLOWFIELD  $\theta_s = 22.5 \text{ DEG}$ ;  $M_\infty = 1.4771237$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .50000938+00 | .14771237+01 | .39269907+00 | .94538478+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .39269907+00 | .10000000+01 | .39269907+00 | .12071068+01 | .50000000+00 |
| .40840703+00 | .10002322+01 | .37756266+00 | .11996333+01 | .51912766+00 |
| .42411498+00 | .10008760+01 | .36348046+00 | .11928802+01 | .53860603+00 |
| .43982293+00 | .10018651+01 | .35033423+00 | .11867955+01 | .55846353+00 |
| .45553089+00 | .10031462+01 | .33802280+00 | .11813382+01 | .57873154+00 |
| .47123884+00 | .10046768+01 | .32645899+00 | .11764759+01 | .59944431+00 |
| .48694680+00 | .10064221+01 | .31556711+00 | .11721839+01 | .62063930+00 |
| .50265473+00 | .10083540+01 | .30528108+00 | .11684437+01 | .64235723+00 |
| .51836266+00 | .10102093+01 | .29659940+00 | .11655723+01 | .66213686+00 |
| .53407059+00 | .10121807+01 | .28831437+00 | .11631221+01 | .68239916+00 |
| .54977852+00 | .10142572+01 | .28039341+00 | .11610914+01 | .70318117+00 |
| .56548645+00 | .10164296+01 | .27280726+00 | .11594813+01 | .72452336+00 |
| .58119438+00 | .10186904+01 | .26552929+00 | .11582962+01 | .74646977+00 |
| .59690231+00 | .10210335+01 | .25853536+00 | .11575439+01 | .76906890+00 |
| .61261024+00 | .10234540+01 | .25180349+00 | .11572353+01 | .79237384+00 |
| .62831817+00 | .10259324+01 | .24611214+00 | .11573403+01 | .81339048+00 |
| .64402610+00 | .10284652+01 | .24059343+00 | .11578075+01 | .83503499+00 |
| .65973403+00 | .10301508+01 | .23523573+00 | .11586518+01 | .85735483+00 |
| .67544196+00 | .10324883+01 | .23002809+00 | .11598899+01 | .88040171+00 |
| .69114989+00 | .10348773+01 | .22496032+00 | .11615420+01 | .90423288+00 |
| .70685782+00 | .10373176+01 | .22002872+00 | .11636312+01 | .92891141+00 |
| .72256575+00 | .10398096+01 | .21520619+00 | .11661842+01 | .95450731+00 |
| .73827368+00 | .10419874+01 | .21116749+00 | .11687652+01 | .97723571+00 |
| .75398161+00 | .10442044+01 | .20720603+00 | .11717321+01 | .10007498+01 |
| .76968954+00 | .10464616+01 | .20331482+00 | .11751104+01 | .10251099+01 |
| .78539747+00 | .10487603+01 | .19949485+00 | .11789284+01 | .10503824+01 |
| .80110540+00 | .10511019+01 | .19573530+00 | .11832187+01 | .10766414+01 |
| .81681333+00 | .10534882+01 | .19203841+00 | .11880181+01 | .11039694+01 |
| .83252126+00 | .10559214+01 | .18838449+00 | .11933687+01 | .11324591+01 |
| .84822919+00 | .10579864+01 | .18538082+00 | .11982831+01 | .11571627+01 |
| .86393712+00 | .10600872+01 | .18240799+00 | .12036449+01 | .11828125+01 |
| .87964505+00 | .10622255+01 | .17946523+00 | .12094897+01 | .12094833+01 |
| .89535298+00 | .10644033+01 | .17654877+00 | .12158574+01 | .12372587+01 |
| .91106091+00 | .10666229+01 | .17364676+00 | .12227933+01 | .12662323+01 |
| .92676884+00 | .10688868+01 | .17076924+00 | .12303487+01 | .12965095+01 |
| .94247677+00 | .10711978+01 | .16790816+00 | .12385824+01 | .13282091+01 |
| .95818470+00 | .10730827+01 | .16562901+00 | .12457027+01 | .13646832+01 |
| .97389263+00 | .10750017+01 | .16335654+00 | .12533389+01 | .13822316+01 |
| .98960056+00 | .10769568+01 | .16108901+00 | .12615354+01 | .14109916+01 |
| .10000000+01 | .10789502+01 | .15882444+00 | .12703416+01 | .14409103+01 |

TABLE 162. (Concluded)

$$M_{\infty} = .14771237+01$$

$$\Theta_s = .39269907+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .85520804+00 | .10809845+01 | .15656079+00 | .12798140+01 | .14722478+01 |
| .86218929+00 | .10830626+01 | .15429579+00 | .12900167+01 | .15050781+01 |
| .86917055+00 | .10851875+01 | .15202708+00 | .13010235+01 | .15395427+01 |
| .87440649+00 | .10868141+01 | .15032152+00 | .13098567+01 | .15665600+01 |
| .87964243+00 | .10884708+01 | .14861116+00 | .13192302+01 | .15946639+01 |
| .88487837+00 | .10901593+01 | .14689466+00 | .13291895+01 | .16239405+01 |
| .89011431+00 | .10918819+01 | .14517862+00 | .13397861+01 | .16544859+01 |
| .89535025+00 | .10936407+01 | .14343752+00 | .13510780+01 | .16864083+01 |
| .90058619+00 | .10954383+01 | .14169858+00 | .13631310+01 | .17198302+01 |
| .90582213+00 | .10972776+01 | .13993692+00 | .13760206+01 | .17548905+01 |
| .90931275+00 | .10985286+01 | .13875971+00 | .13851207+01 | .17792521+01 |
| .91280270+00 | .10998005+01 | .13757133+00 | .13946580+01 | .18044599+01 |
| .91629256+00 | .11010947+01 | .13637692+00 | .14046658+01 | .18305760+01 |
| .91978241+00 | .11024123+01 | .13517366+00 | .14151798+01 | .18576655+01 |
| .92327226+00 | .11037547+01 | .13396063+00 | .14262395+01 | .18857996+01 |
| .92676211+00 | .11051235+01 | .13273688+00 | .14378888+01 | .19150573+01 |
| .93025196+00 | .11065203+01 | .13150131+00 | .14501770+01 | .19455271+01 |
| .93374182+00 | .11072298+01 | .13087874+00 | .14565779+01 | .19612471+01 |
| .93374182+00 | .11079471+01 | .13025276+00 | .14631699+01 | .19773086+01 |
| .93548674+00 | .11086724+01 | .12962320+00 | .14699312+01 | .19937255+01 |
| .93723167+00 | .11094059+01 | .12898988+00 | .14769004+01 | .20105135+01 |
| .93897659+00 | .11101481+01 | .12835260+00 | .14840767+01 | .20276888+01 |
| .94072152+00 | .11108991+01 | .12771315+00 | .14914701+01 | .20452689+01 |
| .94246645+00 | .11116594+01 | .12706535+00 | .14990910+01 | .20632724+01 |
| .94421137+00 | .11124294+01 | .12641494+00 | .15069508+01 | .20817193+01 |
| .94538478+00 | .11129528+01 | .12597486+00 | .15123767+01 | .20943843+01 |

$$.64600706-02 = \Delta S/R$$

$$.16978707+01 = P_5/P_{\infty}$$

$$.14649891+01 = \rho_5/\rho_{\infty}$$

$$.12954846+01 = T_5/T_{\infty}$$



TABLE 163. CONICAL FLOWFIELD  $\theta_s = 22.5 \text{ DEG}$ ;  $M_\infty = 1.5$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .50748241+00 | .15000005+01 | .39269907+00 | .92838226+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .39269907+00 | .10149458+01 | .39269907+00 | .12071068+01 | .50000000+00 |
| .40840703+00 | .10151815+01 | .37756247+00 | .12032201+01 | .52067979+00 |
| .42411498+00 | .10158352+01 | .36347906+00 | .11996557+01 | .54166529+00 |
| .43982293+00 | .10168394+01 | .35032987+00 | .11964456+01 | .56300449+00 |
| .45553089+00 | .10181404+01 | .33801322+00 | .11936158+01 | .58474626+00 |
| .47123884+00 | .10196952+01 | .32644155+00 | .11911880+01 | .60694052+00 |
| .48563780+00 | .10213133+01 | .31642857+00 | .11893316+01 | .62772664+00 |
| .50003676+00 | .10230932+01 | .30691637+00 | .11878416+01 | .64897753+00 |
| .51443560+00 | .10250167+01 | .29787432+00 | .11867317+01 | .67073678+00 |
| .52883443+00 | .10270687+01 | .28925692+00 | .11860152+01 | .69305077+00 |
| .54323327+00 | .10292367+01 | .28102796+00 | .11857069+01 | .71596920+00 |
| .55632312+00 | .10312999+01 | .27385662+00 | .11857952+01 | .73737388+00 |
| .56941297+00 | .10334444+01 | .26695707+00 | .11862477+01 | .75936538+00 |
| .58250282+00 | .10356651+01 | .26030892+00 | .11870810+01 | .78199132+00 |
| .59559267+00 | .10379578+01 | .25389357+00 | .11883129+01 | .80530305+00 |
| .60868252+00 | .10403191+01 | .24769377+00 | .11899640+01 | .82935686+00 |
| .62046339+00 | .10425010+01 | .24228914+00 | .11918278+01 | .85169065+00 |
| .63224425+00 | .10447353+01 | .23702744+00 | .11940697+01 | .87472490+00 |
| .64402512+00 | .10470211+01 | .23191053+00 | .11967114+01 | .89851373+00 |
| .65580598+00 | .10493579+01 | .22692484+00 | .11997777+01 | .92311669+00 |
| .66758685+00 | .10517458+01 | .22206137+00 | .12032971+01 | .94859986+00 |
| .67805873+00 | .10539116+01 | .21733395+00 | .12068315+01 | .97204926+00 |
| .68853061+00 | .10561186+01 | .21369047+00 | .12107742+01 | .99630833+00 |
| .69900249+00 | .10583676+01 | .20962539+00 | .12151538+01 | .10214396+01 |
| .70947437+00 | .10606597+01 | .20563339+00 | .12200024+01 | .10475125+01 |
| .71994625+00 | .10629962+01 | .20170912+00 | .12253560+01 | .10746039+01 |
| .72910915+00 | .10650783+01 | .19832693+00 | .12304869+01 | .10992117+01 |
| .73827204+00 | .10671971+01 | .19498926+00 | .12360666+01 | .11247290+01 |
| .74743494+00 | .10693539+01 | .19169270+00 | .12421298+01 | .11512266+01 |
| .75659783+00 | .10715505+01 | .18843387+00 | .12487154+01 | .11787833+01 |
| .76576073+00 | .10737888+01 | .18520941+00 | .12558674+01 | .12074872+01 |
| .77361464+00 | .10757423+01 | .18247932+00 | .12624862+01 | .12330782+01 |
| .78146855+00 | .10777296+01 | .17975170+00 | .12695928+01 | .12596537+01 |
| .78932246+00 | .10797526+01 | .17705131+00 | .12772269+01 | .12872909+01 |
| .79717637+00 | .10818132+01 | .17436683+00 | .12854328+01 | .13160753+01 |
| .80503028+00 | .10839136+01 | .17169578+00 | .12942608+01 | .13461034+01 |
| .81157520+00 | .10856960+01 | .16947839+00 | .13021333+01 | .13721542+01 |
| .81812013+00 | .10875094+01 | .16726702+00 | .13105140+01 | .13992133+01 |
| .82466505+00 | .10893554+01 | .16506010+00 | .13194445+01 | .14273583+01 |
| .83120998+00 | .10912360+01 | .16285589+00 | .13289708+01 | .14566757+01 |

TABLE 163. (Concluded)

| $M_{\infty} = .15000005+01$ |              |              | $\Theta_s = .39269907+00$ |              |
|-----------------------------|--------------|--------------|---------------------------|--------------|
| $\Theta$                    | $M_1^*$      | $\psi_1$     | $x$                       | $r$          |
| .83775491+00                | .10931533+01 | .16065256+00 | .13391455+01              | .14872624+01 |
| .84299085+00                | .10947151+01 | .15888926+00 | .13477914+01              | .15127182+01 |
| .84822679+00                | .10963032+01 | .15712419+00 | .13569238+01              | .15391179+01 |
| .85346273+00                | .10979192+01 | .15535621+00 | .13665804+01              | .15665302+01 |
| .85869867+00                | .10995646+01 | .15358415+00 | .13768032+01              | .15950312+01 |
| .86393461+00                | .11012412+01 | .15180662+00 | .13876394+01              | .16247059+01 |
| .86786156+00                | .11025202+01 | .15046905+00 | .13962005+01              | .16477387+01 |
| .87178852+00                | .11038189+01 | .14912698+00 | .14051611+01              | .16716294+01 |
| .87571547+00                | .11051381+01 | .14777967+00 | .14145482+01              | .16962759+01 |
| .87964243+00                | .11064788+01 | .14642639+00 | .14243919+01              | .17217817+01 |
| .88356938+00                | .11078424+01 | .14506636+00 | .14347251+01              | .17482049+01 |
| .88618735+00                | .11087647+01 | .14415547+00 | .14419037+01              | .17663616+01 |
| .88880532+00                | .11096981+01 | .14324090+00 | .14493281+01              | .17849755+01 |
| .89142310+00                | .11106430+01 | .14232239+00 | .14570102+01              | .18040671+01 |
| .89404049+00                | .11116000+01 | .14139967+00 | .14649630+01              | .18236589+01 |
| .89665788+00                | .11125694+01 | .14047235+00 | .14732026+01              | .18437794+01 |
| .89927527+00                | .11135518+01 | .13954004+00 | .14817448+01              | .18644563+01 |
| .90189265+00                | .11145477+01 | .13860240+00 | .14906070+01              | .18857193+01 |
| .90451004+00                | .11155579+01 | .13765902+00 | .14998077+01              | .19076009+01 |
| .90712743+00                | .11165828+01 | .13670944+00 | .15093674+01              | .19301360+01 |
| .90974482+00                | .11176233+01 | .13575327+00 | .15193081+01              | .19533626+01 |
| .91236221+00                | .11186801+01 | .13478992+00 | .15296542+01              | .19773221+01 |
| .91497960+00                | .11197540+01 | .13381889+00 | .15404321+01              | .20020600+01 |
| .91759699+00                | .11208459+01 | .13283959+00 | .15516710+01              | .20276257+01 |
| .92021438+00                | .11219567+01 | .13185141+00 | .15634029+01              | .20540738+01 |
| .92283177+00                | .11230876+01 | .13085359+00 | .15756633+01              | .20814640+01 |
| .92544916+00                | .11242398+01 | .12984543+00 | .15884914+01              | .21098628+01 |
| .92806654+00                | .11254144+01 | .12882610+00 | .16019309+01              | .21393435+01 |
| .92838226+00                | .11255577+01 | .12870234+00 | .16035956+01              | .21429767+01 |

$$.67608654-02 = \Delta S/R$$

$$.19114321+01 = P_s/P_{\infty}$$

$$.14710839+01 = \rho_s/\rho_{\infty}$$

$$.12993359+01 = T_s/T_{\infty}$$

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/ TABLE 164. CONICAL FLOWFIELD  $\theta_s = 22.5 \text{ DEG}$ ;  $M_\infty = 2.0$

| $\underline{u_s}$    | $\underline{M_\infty}$ | $\underline{\theta_s}$ | $\underline{\theta_w}$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .62589158+00         | .19999849+01           | .39269907+00           | .72000754+00           |                 |
| $\underline{\theta}$ | $\underline{M_1^*}$    | $\underline{\psi_1}$   | $\underline{x}$        | $\underline{r}$ |
| .39269907+00         | .12517597+01           | .39269907+00           | .12071068+01           | .50000000+00    |
| .40273471+00         | .12518811+01           | .38289900+00           | .12139691+01           | .51717571+00    |
| .41277035+00         | .12522269+01           | .37354163+00           | .12212159+01           | .53480569+00    |
| .42280598+00         | .12527735+01           | .36458805+00           | .12288696+01           | .55292048+00    |
| .43284162+00         | .12535009+01           | .35600365+00           | .12369546+01           | .57155321+00    |
| .44287726+00         | .12543920+01           | .34775751+00           | .12454977+01           | .59073988+00    |
| .45204023+00         | .12553363+01           | .34050024+00           | .12537231+01           | .60877515+00    |
| .46120321+00         | .12563957+01           | .33348254+00           | .12623800+01           | .62733749+00    |
| .47036618+00         | .12575619+01           | .32668483+00           | .12714956+01           | .64646225+00    |
| .47952915+00         | .12588283+01           | .32009690+00           | .12811001+01           | .66618809+00    |
| .48869213+00         | .12601887+01           | .31369778+00           | .12912265+01           | .68655721+00    |
| .49782444+00         | .12614964+01           | .30806692+00           | .13008689+01           | .70557932+00    |
| .50527270+00         | .12628738+01           | .30255920+00           | .13109985+01           | .72520325+00    |
| .51356294+00         | .12643185+01           | .29718356+00           | .13216482+01           | .74547011+00    |
| .52185318+00         | .12658280+01           | .29192546+00           | .13328544+01           | .76642479+00    |
| .53014342+00         | .12674008+01           | .28677670+00           | .13446571+01           | .78811652+00    |
| .53756100+00         | .12688606+01           | .28225616+00           | .13557597+01           | .80819420+00    |
| .54497858+00         | .12703693+01           | .27781155+00           | .13674109+01           | .82894825+00    |
| .55239616+00         | .12719265+01           | .27343765+00           | .13796497+01           | .85042565+00    |
| .55981375+00         | .12735320+01           | .26912931+00           | .13925193+01           | .87267805+00    |
| .56723133+00         | .12751859+01           | .26488166+00           | .14060673+01           | .89576232+00    |
| .57377625+00         | .12766856+01           | .26118018+00           | .14186273+01           | .91687182+00    |
| .58032118+00         | .12782238+01           | .25751879+00           | .14317972+01           | .93872571+00    |
| .58686610+00         | .12798008+01           | .25389414+00           | .14456219+01           | .96137657+00    |
| .59341103+00         | .12814176+01           | .25030298+00           | .14601511+01           | .98488240+00    |
| .59995595+00         | .12830749+01           | .24674189+00           | .14754399+01           | .10093073+01    |
| .60652822+00         | .12845451+01           | .24367732+00           | .14893521+01           | .10312740+01    |
| .61130049+00         | .12860474+01           | .24063052+00           | .15039255+01           | .10540358+01    |
| .61697276+00         | .12875830+01           | .23759921+00           | .15192096+01           | .10776493+01    |
| .62264503+00         | .12891530+01           | .23458101+00           | .15352586+01           | .11021772+01    |
| .62831730+00         | .12907588+01           | .23157343+00           | .15521343+01           | .11276886+01    |
| .63311691+00         | .12921465+01           | .22903478+00           | .15671091+01           | .11501006+01    |
| .63791652+00         | .12935619+01           | .22650062+00           | .15827699+01           | .11733237+01    |
| .64271613+00         | .12950061+01           | .22396868+00           | .15991673+01           | .11974152+01    |
| .64751574+00         | .12964804+01           | .22143736+00           | .16163576+01           | .12224361+01    |
| .65231536+00         | .12979863+01           | .21890473+00           | .16344037+01           | .12484626+01    |
| .65624231+00         | .12992428+01           | .21683016+00           | .16498537+01           | .12705545+01    |
| .66016927+00         | .13005225+01           | .21475220+00           | .16659656+01           | .12934160+01    |
| .66409622+00         | .13018263+01           | .21266953+00           | .16827863+01           | .13170990+01    |
| .66802318+00         | .13031555+01           | .21058883+00           | .17003676+01           | .13416608+01    |

TABLE 164. (Concluded)

$$M_{\infty} = .19999849+01$$

$$\Theta_s = .39269907+00$$

| $\underline{e}$ | $\underline{M_1^*}$ | $\underline{\psi_1}$ | $\underline{x}$ | $\underline{r}$ |
|-----------------|---------------------|----------------------|-----------------|-----------------|
| .67194984+00    | .13045115+01        | .20848473+00         | .17187654+01    | .13671623+01    |
| .67500346+00    | .13055861+01        | .20684842+00         | .17336787+01    | .13876895+01    |
| .67805708+00    | .13066782+01        | .20520579+00         | .17491582+01    | .14088646+01    |
| .68111070+00    | .13077888+01        | .20355609+00         | .17652401+01    | .14307272+01    |
| .68416432+00    | .13089186+01        | .20189843+00         | .17819638+01    | .14533201+01    |
| .68721794+00    | .13100687+01        | .20023181+00         | .17993729+01    | .14766908+01    |
| .68939910+00    | .13109031+01        | .19903529+00         | .18122539+01    | .14938887+01    |
| .69158026+00    | .13117487+01        | .19783332+00         | .18255277+01    | .15115301+01    |
| .69376142+00    | .13126059+01        | .19662538+00         | .18392150+01    | .15296373+01    |
| .69594257+00    | .13134752+01        | .19541107+00         | .18533376+01    | .15482338+01    |
| .69812373+00    | .13143571+01        | .19418987+00         | .18679194+01    | .15673451+01    |
| .69943243+00    | .13148925+01        | .19345365+00         | .18768993+01    | .15790703+01    |
| .70074112+00    | .13154328+01        | .19271466+00         | .18860595+01    | .15909970+01    |
| .70204981+00    | .13159780+01        | .19197277+00         | .18954062+01    | .16031317+01    |
| .70335851+00    | .13165283+01        | .19122784+00         | .19049460+01    | .16154816+01    |
| .70466720+00    | .13170838+01        | .19047979+00         | .19146859+01    | .16280541+01    |
| .70597590+00    | .13176447+01        | .18972842+00         | .19246328+01    | .16408566+01    |
| .70728459+00    | .13182111+01        | .18897358+00         | .19347943+01    | .16538972+01    |
| .70859329+00    | .13187832+01        | .18821519+00         | .19451787+01    | .16671847+01    |
| .70990198+00    | .13193611+01        | .18745304+00         | .19557942+01    | .16807279+01    |
| .71121068+00    | .13199451+01        | .18668696+00         | .19666498+01    | .16945362+01    |
| .71251937+00    | .13205352+01        | .18591678+00         | .19777551+01    | .17086198+01    |
| .71382806+00    | .13211318+01        | .18514232+00         | .19891199+01    | .17229893+01    |
| .71513676+00    | .13217349+01        | .18436337+00         | .20007650+01    | .17376559+01    |
| .71644545+00    | .13223449+01        | .18357975+00         | .20126714+01    | .17526313+01    |
| .71775415+00    | .13229619+01        | .18279123+00         | .20248815+01    | .17679286+01    |
| .71906284+00    | .13235861+01        | .18199758+00         | .20373977+01    | .17835608+01    |
| .72006754+00    | .13240414+01        | .18142133+00         | .20466305+01    | .17950612+01    |

$$.21978311-01 = \Delta S/R$$

$$.23476306+01 = P_s/P_{\infty}$$

$$.16540753+01 = \rho_s/\rho_{\infty}$$

$$.14193010+01 = T_s/T_{\infty}$$



16 TABLE 165. CONICAL FLOWFIELD  $\theta_s = 22.5 \text{ DEG}$ ;  $M_\infty = 2.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .69946598+00 | .24999961+01 | .39269907+00 | .62946333+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .39269907+00 | .13989057+01 | .39269907+00 | .12071068+01 | .50000000+00 |
| .39968038+00 | .13989722+01 | .38583244+00 | .12153151+01 | .51336919+00 |
| .40666170+00 | .13991644+01 | .37918380+00 | .12238630+01 | .52707866+00 |
| .41364301+00 | .13994729+01 | .37273730+00 | .12327685+01 | .54114749+00 |
| .42062432+00 | .13998895+01 | .36647845+00 | .12420511+01 | .55559624+00 |
| .42716930+00 | .14003719+01 | .36076940+00 | .12511149+01 | .56950670+00 |
| .43371429+00 | .14009378+01 | .35520852+00 | .12605479+01 | .58379028+00 |
| .44025927+00 | .14015825+01 | .34977145+00 | .12703709+01 | .59846828+00 |
| .44680425+00 | .14023021+01 | .34446442+00 | .12806062+01 | .61356363+00 |
| .45291290+00 | .14030381+01 | .33961678+00 | .12905529+01 | .62805107+00 |
| .45902155+00 | .14038337+01 | .33486465+00 | .13009018+01 | .64294562+00 |
| .46513020+00 | .14046868+01 | .33020205+00 | .13116763+01 | .65827079+00 |
| .47123884+00 | .14055952+01 | .32562331+00 | .13229022+01 | .67405223+00 |
| .47691116+00 | .14064871+01 | .32144199+00 | .13337547+01 | .68913917+00 |
| .48258348+00 | .14074244+01 | .31732414+00 | .13450448+01 | .70466758+00 |
| .48825580+00 | .14084060+01 | .31326573+00 | .13567988+01 | .72066339+00 |
| .49392811+00 | .14094313+01 | .30926283+00 | .13690457+01 | .73715504+00 |
| .49916410+00 | .14104161+01 | .30561385+00 | .13808153+01 | .75284481+00 |
| .50440004+00 | .14114373+01 | .30200593+00 | .13930586+01 | .76900946+00 |
| .50963598+00 | .14124948+01 | .29843626+00 | .14058054+01 | .78567779+00 |
| .51487193+00 | .14135886+01 | .29490197+00 | .14190878+01 | .80288088+00 |
| .51967154+00 | .14146229+01 | .29169081+00 | .14317640+01 | .81914910+00 |
| .52447115+00 | .14156881+01 | .28850483+00 | .14449496+01 | .83592360+00 |
| .52927076+00 | .14167841+01 | .28534181+00 | .14586771+01 | .85323542+00 |
| .53407037+00 | .14179115+01 | .28219949+00 | .14729820+01 | .87111833+00 |
| .53884336+00 | .14189638+01 | .27935901+00 | .14865201+01 | .88790207+00 |
| .54279694+00 | .14200429+01 | .27653209+00 | .15005995+01 | .90521855+00 |
| .54716022+00 | .14211491+01 | .27371700+00 | .15152553+01 | .92310070+00 |
| .55152351+00 | .14222831+01 | .27091197+00 | .15305256+01 | .94158448+00 |
| .55545046+00 | .14233280+01 | .26839446+00 | .15448291+01 | .95876682+00 |
| .55937742+00 | .14243966+01 | .26588226+00 | .15596981+01 | .97649980+00 |
| .56330437+00 | .14254895+01 | .26337380+00 | .15751695+01 | .99481771+00 |
| .56723133+00 | .14266074+01 | .26086770+00 | .15912837+01 | .10137580+01 |
| .57072195+00 | .14276228+01 | .25864063+00 | .16061825+01 | .10311492+01 |
| .57421258+00 | .14286593+01 | .25641301+00 | .16216582+01 | .10490960+01 |
| .57770321+00 | .14297176+01 | .25418355+00 | .16377482+01 | .10676328+01 |
| .58119383+00 | .14307985+01 | .25195100+00 | .16544932+01 | .10867970+01 |
| .58424813+00 | .14317635+01 | .24999893+00 | .16697178+01 | .11041127+01 |
| .58730175+00 | .14327482+01 | .24803223+00 | .16855078+01 | .11219663+01 |
| .59035537+00 | .14337522+01 | .24606815+00 | .17019026+01 | .11403946+01 |



TABLE 165. (Concluded)

| $M_{\infty} = .24999961+01$ |              |              | $\Theta_s = .39269907+00$ |                 |
|-----------------------------|--------------|--------------|---------------------------|-----------------|
| $\Theta$                    | $M_1^*$      | $\psi_1$     | $\underline{x}$           | $\underline{r}$ |
| .59340899+00                | .14347762+01 | .24409157+00 | .17189417+01              | .11594334+01    |
| .59602638+00                | .14356706+01 | .24239390+00 | .17340920+01              | .11762678+01    |
| .59664377+00                | .14365809+01 | .24068988+00 | .17497772+01              | .11936064+01    |
| .60126116+00                | .14375077+01 | .23897871+00 | .17660293+01              | .12114781+01    |
| .60387855+00                | .14384517+01 | .23725945+00 | .17828839+01              | .12299151+01    |
| .60605971+00                | .14392521+01 | .23581982+00 | .17974173+01              | .12457358+01    |
| .60824087+00                | .14400654+01 | .23437335+00 | .18124199+01              | .12619945+01    |
| .61042202+00                | .14408922+01 | .23291936+00 | .18279182+01              | .12787151+01    |
| .61260318+00                | .14417330+01 | .23145718+00 | .18439405+01              | .12959227+01    |
| .61434811+00                | .14424162+01 | .23028113+00 | .18571563+01              | .13100580+01    |
| .61609303+00                | .14431089+01 | .22909898+00 | .18707444+01              | .13245378+01    |
| .61783796+00                | .14438116+01 | .22791033+00 | .18847228+01              | .13393784+01    |
| .61958288+00                | .14445247+01 | .22671482+00 | .18991114+01              | .13545972+01    |
| .62089158+00                | .14450666+01 | .22581838+00 | .19101846+01              | .13662707+01    |
| .62220027+00                | .14456146+01 | .22490758+00 | .19215098+01              | .13781758+01    |
| .62350897+00                | .14461691+01 | .22399718+00 | .19330974+01              | .13903217+01    |
| .62481766+00                | .14467302+01 | .22308204+00 | .19449579+01              | .14027176+01    |
| .62612636+00                | .14472980+01 | .22216185+00 | .19571023+01              | .14153734+01    |
| .62743505+00                | .14478729+01 | .22123639+00 | .19695431+01              | .14282999+01    |
| .62874375+00                | .14484550+01 | .22030535+00 | .19822930+01              | .14415084+01    |
| .62946333+00                | .14487782+01 | .21979897+00 | .19894400+01              | .14488954+01    |

$$.56032851-01 = \Delta S/R$$

$$.29427356+01 = P_g/P_{\infty}$$

$$.18685767+01 = \rho_g/\rho_{\infty}$$

$$.15748541+01 = T_g/T_{\infty}$$

TABLE 166. CONICAL FLOWFIELD  $\theta_s = 22.5 \text{ DEG}$ ;  $M_\infty = 3.0$ 

| $\underline{u}_s$    | $\underline{M}_\infty$ | $\underline{\theta}_s$ | $\underline{\theta}_w$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .74853406+00         | .29999969+01           | .39269907+00           | .57930831+00           |                 |
| $\underline{\theta}$ | $\underline{M}_1^*$    | $\underline{\psi}_1$   | $\underline{x}$        | $\underline{r}$ |
| .39269907+00         | .14970400+01           | .39269907+00           | .12071068+01           | .50000000+00    |
| .39793506+00         | .14970803+01           | .38752783+00           | .12152431+01           | .51084115+00    |
| .40317104+00         | .14971979+01           | .38248052+00           | .12236592+01           | .52193484+00    |
| .40840703+00         | .14973882+01           | .37754932+00           | .12323682+01           | .53329331+00    |
| .41364301+00         | .14976475+01           | .37272692+00           | .12413845+01           | .54492968+00    |
| .41887899+00         | .14979722+01           | .36800655+00           | .12507236+01           | .55685797+00    |
| .42411498+00         | .14983593+01           | .36338184+00           | .12604019+01           | .56909323+00    |
| .42935096+00         | .14988059+01           | .35884686+00           | .12704374+01           | .58165158+00    |
| .43458695+00         | .14993096+01           | .35439596+00           | .12808494+01           | .59455044+00    |
| .43982293+00         | .14998682+01           | .35002384+00           | .12916589+01           | .60780848+00    |
| .44505892+00         | .15004799+01           | .34572544+00           | .13028885+01           | .62144585+00    |
| .44992224+00         | .15010289+01           | .34219426+00           | .13125851+01           | .63311583+00    |
| .45378556+00         | .15016128+01           | .33871223+00           | .13226061+01           | .64507800+00    |
| .45814888+00         | .15022307+01           | .33527075+00           | .13329679+01           | .65734693+00    |
| .46251220+00         | .15028822+01           | .33186930+00           | .13436883+01           | .66993820+00    |
| .46687552+00         | .15035665+01           | .32850540+00           | .13547867+01           | .68286862+00    |
| .47123884+00         | .15042834+01           | .32517663+00           | .13662837+01           | .69615623+00    |
| .47560216+00         | .15050324+01           | .32188066+00           | .13782018+01           | .70982047+00    |
| .47996549+00         | .15058134+01           | .31861512+00           | .13905654+01           | .72388240+00    |
| .48432881+00         | .15066262+01           | .31537772+00           | .14034008+01           | .73836475+00    |
| .48869213+00         | .15074707+01           | .31216615+00           | .14167367+01           | .75329212+00    |
| .49218278+00         | .15081692+01           | .30961394+00           | .14277867+01           | .76557239+00    |
| .49567344+00         | .15088882+01           | .30707560+00           | .14391945+01           | .77816943+00    |
| .49916410+00         | .15096277+01           | .30454996+00           | .14509788+01           | .79109918+00    |
| .50265473+00         | .15103880+01           | .30203878+00           | .14631594+01           | .80437846+00    |
| .50614536+00         | .15111690+01           | .29953182+00           | .14757580+01           | .81802578+00    |
| .50963598+00         | .15119713+01           | .29703693+00           | .14887984+01           | .83206099+00    |
| .51312661+00         | .15127951+01           | .29454977+00           | .15023058+01           | .84650543+00    |
| .51661724+00         | .15136407+01           | .29206907+00           | .15163079+01           | .86138231+00    |
| .52010787+00         | .15145086+01           | .28959353+00           | .15308345+01           | .87671666+00    |
| .52359849+00         | .15153993+01           | .28712174+00           | .15459184+01           | .89253581+00    |
| .52621346+00         | .15160826+01           | .28526945+00           | .15576184+01           | .90473607+00    |
| .52883443+00         | .15167792+01           | .28341789+00           | .15696681+01           | .91723924+00    |
| .53145240+00         | .15174895+01           | .28156631+00           | .15820851+01           | .93005989+00    |
| .53407037+00         | .15182137+01           | .27971407+00           | .15948882+01           | .94321340+00    |
| .53668834+00         | .15189524+01           | .27786051+00           | .16080974+01           | .95671654+00    |
| .53930631+00         | .15197056+01           | .27600484+00           | .16217346+01           | .97058719+00    |
| .54192880+00         | .15204748+01           | .27414613+00           | .16356207+01           | .98484208+00    |
| .54454119+00         | .15212597+01           | .27228374+00           | .16503831+01           | .99950405+00    |
| .54715858+00         | .15220605+01           | .27041683+00           | .16654498+01           | .10145961+01    |

TABLE 166. (Concluded)

$$M_{\infty} = .29999969+01$$

$$\Theta_s = .39269907+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .54977597+00 | .15228780+01 | .26854454+00 | .16810508+01 | .10301429+01 |
| .55152089+00 | .15234324+01 | .26729284+00 | .16917643+01 | .10407730+01 |
| .55326582+00 | .15239947+01 | .26603808+00 | .17027399+01 | .10516252+01 |
| .55501074+00 | .15245650+01 | .26477986+00 | .17139888+01 | .10627086+01 |
| .55675567+00 | .15251434+01 | .26351790+00 | .17255226+01 | .10740328+01 |
| .55850060+00 | .15257303+01 | .26225187+00 | .17373537+01 | .10856076+01 |
| .56024552+00 | .15263259+01 | .26098137+00 | .17494955+01 | .10974439+01 |
| .56199045+00 | .15269304+01 | .25970609+00 | .17619618+01 | .11095528+01 |
| .56373537+00 | .15275441+01 | .25842559+00 | .17747680+01 | .11219469+01 |
| .56548030+00 | .15281672+01 | .25713950+00 | .17879302+01 | .11346390+01 |
| .56722523+00 | .15288002+01 | .25584733+00 | .18014655+01 | .11476429+01 |
| .56897769+00 | .15294432+01 | .25454872+00 | .18153924+01 | .11609734+01 |
| .56984261+00 | .15297686+01 | .25389680+00 | .18225090+01 | .11677663+01 |
| .57071508+00 | .15300967+01 | .25324308+00 | .18297310+01 | .11746468+01 |
| .57158754+00 | .15304275+01 | .25258746+00 | .18370613+01 | .11816173+01 |
| .57246000+00 | .15307611+01 | .25192991+00 | .18445028+01 | .11886800+01 |
| .57333247+00 | .15310974+01 | .25127033+00 | .18520582+01 | .11958373+01 |
| .57420493+00 | .15314367+01 | .25060867+00 | .18597307+01 | .12030916+01 |
| .57507739+00 | .15317788+01 | .24994484+00 | .18675235+01 | .12104454+01 |
| .57594986+00 | .15321240+01 | .24927881+00 | .18754399+01 | .12179014+01 |
| .57682232+00 | .15324721+01 | .24861041+00 | .18834832+01 | .12254623+01 |
| .57769478+00 | .15328234+01 | .24793965+00 | .18916572+01 | .12331310+01 |
| .57856724+00 | .15331778+01 | .24726632+00 | .18999655+01 | .12409104+01 |
| .57930831+00 | .15334814+01 | .24669249+00 | .19071310+01 | .12476075+01 |

$$.11114110+00 = \Delta S/R$$

$$.36710110+01 = P_s/P_{\infty}$$

$$.20871654+01 = \rho_s/\rho_{\infty}$$

$$.17588501+01 = T_s/T_{\infty}$$

TABLE 167. CONICAL FLOWFIELD  $\theta_s = 22.5 \text{ DEG}$ ;  $M_\infty = 4.0$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .80660398+00 | .39999852+01 | .39269907+00 | .52762536+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .39269907+00 | .16131777+01 | .39269907+00 | .12071068+01 | .50000000+00 |
| .39618973+00 | .16131971+01 | .38923730+00 | .12144814+01 | .50802857+00 |
| .39968038+00 | .16132543+01 | .38583125+00 | .12220546+01 | .51621602+00 |
| .40317104+00 | .16133478+01 | .38247798+00 | .12298339+01 | .52456859+00 |
| .40666170+00 | .16134762+01 | .37917469+00 | .12378278+01 | .53309282+00 |
| .41015235+00 | .16136385+01 | .37591872+00 | .12460450+01 | .54179575+00 |
| .41364301+00 | .16138333+01 | .37270757+00 | .12544949+01 | .55068471+00 |
| .41713367+00 | .16140599+01 | .36953880+00 | .12631875+01 | .55976761+00 |
| .42062432+00 | .16143173+01 | .36641013+00 | .12721335+01 | .56905275+00 |
| .42411498+00 | .16146046+01 | .36331931+00 | .12813440+01 | .57854896+00 |
| .42760564+00 | .16149212+01 | .36026422+00 | .12908314+01 | .58826572+00 |
| .43109629+00 | .16152663+01 | .35724279+00 | .13006084+01 | .59821295+00 |
| .43458695+00 | .16156394+01 | .35425301+00 | .13106888+01 | .60840142+00 |
| .43807761+00 | .16160401+01 | .35129293+00 | .13210875+01 | .61884256+00 |
| .44156826+00 | .16164678+01 | .34836065+00 | .13318206+01 | .62954863+00 |
| .44505892+00 | .16169223+01 | .34545429+00 | .13429048+01 | .64053266+00 |
| .44767691+00 | .16172805+01 | .34329043+00 | .13514595+01 | .64896154+00 |
| .45029490+00 | .16176534+01 | .34113935+00 | .13602304+01 | .65756099+00 |
| .45291290+00 | .16180410+01 | .33900028+00 | .13692262+01 | .66633770+00 |
| .45553089+00 | .16184433+01 | .33687248+00 | .13784563+01 | .67529867+00 |
| .45814888+00 | .16188601+01 | .33475519+00 | .13879304+01 | .68445144+00 |
| .46076687+00 | .16192916+01 | .33264763+00 | .13976591+01 | .69380389+00 |
| .46338487+00 | .16197376+01 | .33054907+00 | .14076534+01 | .70336442+00 |
| .46600286+00 | .16201982+01 | .32845873+00 | .14179252+01 | .71314199+00 |
| .46862085+00 | .16206736+01 | .32637585+00 | .14284872+01 | .72314607+00 |
| .47123884+00 | .16211636+01 | .32429964+00 | .14393528+01 | .73338679+00 |
| .47385684+00 | .16216685+01 | .32222932+00 | .14505366+01 | .74387501+00 |
| .47647483+00 | .16221884+01 | .32016408+00 | .14620538+01 | .75462214+00 |
| .47909282+00 | .16227234+01 | .31810311+00 | .14739212+01 | .76564062+00 |
| .48171081+00 | .16232738+01 | .31604556+00 | .14861563+01 | .77694360+00 |
| .48432881+00 | .16238397+01 | .31399058+00 | .14987783+01 | .78854529+00 |
| .48694741+00 | .16242257+01 | .31262157+00 | .15074181+01 | .79645319+00 |
| .48781946+00 | .16246188+01 | .31125307+00 | .15162454+01 | .80450535+00 |
| .48956479+00 | .16250191+01 | .30988472+00 | .15252670+01 | .81270686+00 |
| .49131012+00 | .16254267+01 | .30851632+00 | .15344903+01 | .82106303+00 |
| .49305545+00 | .16258416+01 | .30714753+00 | .15439228+01 | .82957949+00 |
| .49480078+00 | .16262641+01 | .30577806+00 | .15535725+01 | .83826209+00 |
| .49654610+00 | .16266941+01 | .30440759+00 | .15634480+01 | .84711712+00 |
| .49829140+00 | .16271326+01 | .30303400+00 | .15735580+01 | .85615092+00 |
| .50003669+00 | .16275789+01 | .30166277+00 | .15839121+01 | .86537060+00 |

TABLE 167. (Concluded)

| $M_{\infty} = .39999852+01$ |              |              | $\Theta_s = .39269907+00$ |                 |
|-----------------------------|--------------|--------------|---------------------------|-----------------|
| $\Theta$                    | $M_1^*$      | $\psi_1$     | $\underline{x}$           | $\underline{r}$ |
| .50178162+00                | .16280333+01 | .30028719+00 | .15945183+01              | .87478159+00    |
| .50352655+00                | .16284959+01 | .29890927+00 | .16053895+01              | .88439360+00    |
| .50527147+00                | .16289668+01 | .29752867+00 | .16165368+01              | .89421488+00    |
| .50701640+00                | .16294463+01 | .29614497+00 | .16279725+01              | .90425426+00    |
| .50876132+00                | .16299345+01 | .29475777+00 | .16397094+01              | .91452100+00    |
| .51050625+00                | .16304317+01 | .29336669+00 | .16517612+01              | .92502515+00    |
| .51137871+00                | .16306837+01 | .29266956+00 | .16579097+01              | .93036951+00    |
| .51225118+00                | .16309381+01 | .29197127+00 | .16641426+01              | .93577726+00    |
| .51312364+00                | .16311948+01 | .29127178+00 | .16704618+01              | .94124990+00    |
| .51399610+00                | .16314539+01 | .29057103+00 | .16768694+01              | .94678880+00    |
| .51486856+00                | .16317155+01 | .28986897+00 | .16833675+01              | .95239556+00    |
| .51574103+00                | .16319795+01 | .28916552+00 | .16899582+01              | .95807173+00    |
| .51661349+00                | .16322459+01 | .28846060+00 | .16966440+01              | .96381903+00    |
| .51748595+00                | .16325150+01 | .28775416+00 | .17034273+01              | .96963916+00    |
| .51835842+00                | .16327866+01 | .28704619+00 | .17103103+01              | .97553384+00    |
| .51923088+00                | .16330608+01 | .28633649+00 | .17172958+01              | .98150497+00    |
| .52010334+00                | .16333376+01 | .28562512+00 | .17243863+01              | .98755439+00    |
| .52097581+00                | .16336172+01 | .28491190+00 | .17315846+01              | .99368414+00    |
| .52184827+00                | .16338995+01 | .28419685+00 | .17388937+01              | .99989622+00    |
| .52272073+00                | .16341846+01 | .28347980+00 | .17463165+01              | .10061929+01    |
| .52359319+00                | .16344726+01 | .28276071+00 | .17538561+01              | .10125763+01    |
| .52446566+00                | .16347634+01 | .28203952+00 | .17615157+01              | .10190486+01    |
| .52533812+00                | .16350572+01 | .28131611+00 | .17692986+01              | .10256124+01    |
| .52621058+00                | .16353540+01 | .28059036+00 | .17772084+01              | .10322701+01    |
| .52708305+00                | .16356538+01 | .27986226+00 | .17852489+01              | .10390244+01    |
| .52795552+00                | .16359567+01 | .27913243+00 | .17933141+01              | .10457726+01    |

$$.27760801+00 = \Delta S/R$$

$$.55183153+01 = P_s/P_{\infty}$$

$$.24937224+01 = \rho_s/\rho_{\infty}$$

$$.22128828+01 = T_s/T_{\infty}$$



TABLE 168. CONICAL FLOWFIELD  $\theta_s = 22.5 \text{ DEG}$ ;  $M_\infty = 5.0$

| $\underline{u_s}$    | $\underline{M_\infty}$ | $\underline{\theta_s}$ | $\underline{\theta_w}$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .83759556+00         | .49999998+01           | .39269907+00           | .50273708+00           |                 |
| $\underline{\theta}$ | $\underline{M_1^*}$    | $\underline{\psi_1}$   | $\underline{x}$        | $\underline{r}$ |
| .39269907+00         | .16751597+01           | .39269907+00           | .12071068+01           | .50000000+00    |
| .39662606+00         | .16751852+01           | .38880844+00           | .12169667+01           | .50969222+00    |
| .40055305+00         | .16752601+01           | .38498719+00           | .12271615+01           | .51963575+00    |
| .40448004+00         | .16753823+01           | .38123054+00           | .12377083+01           | .52984328+00    |
| .40840703+00         | .16755499+01           | .37753398+00           | .12486257+01           | .54032854+00    |
| .41233401+00         | .16757615+01           | .37389326+00           | .12599339+01           | .55110636+00    |
| .41582467+00         | .16759852+01           | .37070069+00           | .12703313+01           | .56094508+00    |
| .41931533+00         | .16762416+01           | .36754635+00           | .12810713+01           | .57103955+00    |
| .42280598+00         | .16765298+01           | .36442762+00           | .12921715+01           | .58140266+00    |
| .42629664+00         | .16768493+01           | .36134197+00           | .13036512+01           | .59204838+00    |
| .42978730+00         | .16771995+01           | .35828695+00           | .13155312+01           | .60299163+00    |
| .43284162+00         | .16775306+01           | .35563704+00           | .13262721+01           | .61282370+00    |
| .43589595+00         | .16778846+01           | .35300715+00           | .13373529+01           | .62290755+00    |
| .43895027+00         | .16782612+01           | .35039573+00           | .13487908+01           | .63325561+00    |
| .44200459+00         | .16786603+01           | .34780123+00           | .13606048+01           | .64388134+00    |
| .44505892+00         | .16790818+01           | .34522209+00           | .13728149+01           | .65479904+00    |
| .44767691+00         | .16794608+01           | .34302248+00           | .13836125+01           | .66440117+00    |
| .45029490+00         | .16798563+01           | .34083204+00           | .13947320+01           | .67423972+00    |
| .45291290+00         | .16802682+01           | .33864982+00           | .14061894+01           | .68432591+00    |
| .45553089+00         | .16806965+01           | .33647480+00           | .14180015+01           | .69467169+00    |
| .45814888+00         | .16811415+01           | .33430598+00           | .14301867+01           | .70528994+00    |
| .46033054+00         | .16815251+01           | .33250263+00           | .14406403+01           | .71435665+00    |
| .46251220+00         | .16819204+01           | .33070227+00           | .14513789+01           | .72363072+00    |
| .46469386+00         | .16823276+01           | .32890427+00           | .14624154+01           | .73312127+00    |
| .46687552+00         | .16827467+01           | .32710802+00           | .14737640+01           | .74283811+00    |
| .46905718+00         | .16831779+01           | .32531285+00           | .14854394+01           | .75279151+00    |
| .47080251+00         | .16835317+01           | .32387705+00           | .14950256+01           | .76093197+00    |
| .47254784+00         | .16838934+01           | .32244116+00           | .15048400+01           | .76923705+00    |
| .47429317+00         | .16842632+01           | .32100482+00           | .15148917+01           | .77771305+00    |
| .47603850+00         | .16846412+01           | .31956765+00           | .15251904+01           | .78636677+00    |
| .47778380+00         | .16850280+01           | .31812939+00           | .15357464+01           | .79520523+00    |
| .47909278+00         | .16853238+01           | .31704967+00           | .15438389+01           | .80195988+00    |
| .48040175+00         | .16856244+01           | .31596889+00           | .15520874+01           | .80882624+00    |
| .48171072+00         | .16859299+01           | .31488684+00           | .15604968+01           | .81580769+00    |
| .48301970+00         | .16862403+01           | .31380336+00           | .15690728+01           | .82290812+00    |
| .48432867+00         | .16865558+01           | .31271824+00           | .15778206+01           | .83013120+00    |
| .48520132+00         | .16867689+01           | .31199382+00           | .15837512+01           | .83501683+00    |
| .48607397+00         | .16869844+01           | .31126853+00           | .15897626+01           | .83996005+00    |
| .48694662+00         | .16872021+01           | .31054234+00           | .15958569+01           | .84496222+00    |
| .48781927+00         | .16874223+01           | .30981511+00           | .16020360+01           | .85002465+00    |

TABLE 168. (Concluded)

$$M_{\infty} = .49999998+01$$

$$\Theta_s = .39269907+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .48869192+00 | .16876447+01 | .30908683+00 | .16083019+01 | .85514873+00 |
| .48912824+00 | .16877569+01 | .30872228+00 | .16114682+01 | .85773437+00 |
| .48956457+00 | .16878696+01 | .30835744+00 | .16146569+01 | .86033593+00 |
| .49000089+00 | .16879830+01 | .30799228+00 | .16178684+01 | .86295366+00 |
| .49043722+00 | .16880970+01 | .30762685+00 | .16211029+01 | .86558771+00 |
| .49087354+00 | .16882116+01 | .30726108+00 | .16243608+01 | .86823828+00 |
| .49130987+00 | .16883268+01 | .30689498+00 | .16276424+01 | .87090561+00 |
| .49174619+00 | .16884426+01 | .30652856+00 | .16309478+01 | .87358981+00 |
| .49218252+00 | .16885591+01 | .30616181+00 | .16342775+01 | .87629119+00 |
| .49261884+00 | .16886762+01 | .30579470+00 | .16376317+01 | .87900990+00 |
| .49305516+00 | .16887940+01 | .30542724+00 | .16410109+01 | .88174620+00 |
| .49349149+00 | .16889124+01 | .30505939+00 | .16444152+01 | .88450028+00 |
| .49392781+00 | .16890314+01 | .30469118+00 | .16478450+01 | .88727232+00 |
| .49436414+00 | .16891511+01 | .30432254+00 | .16513006+01 | .89006261+00 |
| .49480046+00 | .16892715+01 | .30395355+00 | .16547824+01 | .89287131+00 |
| .49523679+00 | .16893925+01 | .30358414+00 | .16582907+01 | .89569873+00 |
| .49567311+00 | .16895142+01 | .30321430+00 | .16618258+01 | .89854501+00 |
| .49610944+00 | .16896365+01 | .30284403+00 | .16653882+01 | .90141050+00 |
| .49654576+00 | .16897596+01 | .30247334+00 | .16689782+01 | .90429541+00 |
| .49698209+00 | .16898833+01 | .30210219+00 | .16725961+01 | .90719992+00 |
| .49741841+00 | .16900077+01 | .30173058+00 | .16762424+01 | .91012441+00 |
| .49785474+00 | .16901328+01 | .30135850+00 | .16799173+01 | .91306902+00 |
| .49829106+00 | .16902586+01 | .30098592+00 | .16836214+01 | .91603412+00 |
| .49872738+00 | .16903851+01 | .30061284+00 | .16873550+01 | .91901995+00 |
| .49916371+00 | .16905123+01 | .30023927+00 | .16911186+01 | .92202677+00 |
| .49960003+00 | .16906403+01 | .29986521+00 | .16949124+01 | .92505484+00 |
| .50003635+00 | .16907690+01 | .29949059+00 | .16987371+01 | .92810448+00 |
| .50047258+00 | .16908984+01 | .29911533+00 | .17025921+01 | .93117531+00 |
| .50090881+00 | .16910285+01 | .29873954+00 | .17064788+01 | .93426833+00 |
| .50134505+00 | .16911594+01 | .29836317+00 | .17103976+01 | .93738384+00 |
| .50178128+00 | .16912910+01 | .29798626+00 | .17143490+01 | .94052209+00 |
| .50221751+00 | .16914234+01 | .29760870+00 | .17183335+01 | .94368348+00 |
| .50265374+00 | .16915566+01 | .29723058+00 | .17223514+01 | .94686823+00 |
| .50273708+00 | .16915821+01 | .29715829+00 | .17231228+01 | .94747937+00 |

$$.49582300+00 = \Delta S/R$$

$$.78866630+01 = P_s/P_{\infty}$$

$$.28313226+01 = \rho_s/\rho_{\infty}$$

$$.27855050+01 = T_s/T_{\infty}$$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .85577197+00 | .59999861+01 | .39269907+00 | .48886566+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .39269907+00 | .17115119+01 | .39269907+00 | .12071068+01 | .50000000+00 |
| .39618973+00 | .17115325+01 | .38923715+00 | .12168264+01 | .50900947+00 |
| .39968038+00 | .17115932+01 | .38583011+00 | .12268606+01 | .51824619+00 |
| .40317104+00 | .17116924+01 | .38247419+00 | .12372253+01 | .52772129+00 |
| .40666170+00 | .17118290+01 | .37916585+00 | .12479374+01 | .53744671+00 |
| .41015235+00 | .17120016+01 | .37590173+00 | .12590149+01 | .54743522+00 |
| .41364301+00 | .17122092+01 | .37267860+00 | .12704776+01 | .55770064+00 |
| .41669733+00 | .17124190+01 | .36988958+00 | .12808401+01 | .56692170+00 |
| .41975166+00 | .17126544+01 | .36712760+00 | .12915291+01 | .57637677+00 |
| .42280598+00 | .17129149+01 | .36439070+00 | .13025611+01 | .58607739+00 |
| .42586031+00 | .17132003+01 | .36167700+00 | .13139539+01 | .59603588+00 |
| .42891463+00 | .17135101+01 | .35898464+00 | .13257267+01 | .60626543+00 |
| .43196896+00 | .17138442+01 | .35631178+00 | .13378998+01 | .61678021+00 |
| .43458695+00 | .17141497+01 | .35403489+00 | .13486696+01 | .62603154+00 |
| .43720494+00 | .17144727+01 | .35176986+00 | .13597652+01 | .63551407+00 |
| .43982293+00 | .17148133+01 | .34951553+00 | .13712028+01 | .64523900+00 |
| .44244093+00 | .17151714+01 | .34727078+00 | .13830000+01 | .65521821+00 |
| .44505892+00 | .17155470+01 | .34503443+00 | .13951754+01 | .66546444+00 |
| .44767691+00 | .17159403+01 | .34280534+00 | .14077493+01 | .67599152+00 |
| .44985857+00 | .17162815+01 | .34095245+00 | .14185479+01 | .68498927+00 |
| .45204023+00 | .17166351+01 | .33910307+00 | .14296517+01 | .69420150+00 |
| .45422189+00 | .17170011+01 | .33725650+00 | .14410757+01 | .70363802+00 |
| .45640355+00 | .17173798+01 | .33541200+00 | .14528353+01 | .71330937+00 |
| .45858521+00 | .17177712+01 | .33356884+00 | .14649473+01 | .72322678+00 |
| .46076687+00 | .17181755+01 | .33172423+00 | .14774297+01 | .73340236+00 |
| .46251220+00 | .17185084+01 | .33025203+00 | .14876952+01 | .74173734+00 |
| .46425753+00 | .17188498+01 | .32877725+00 | .14982205+01 | .75025283+00 |
| .46600285+00 | .17192000+01 | .32730148+00 | .15090170+01 | .75895636+00 |
| .46774815+00 | .17195595+01 | .32582434+00 | .15200965+01 | .76785582+00 |
| .46949345+00 | .17199279+01 | .32434527+00 | .15314721+01 | .77695988+00 |
| .47123875+00 | .17203053+01 | .32286385+00 | .15431572+01 | .78627757+00 |
| .47254772+00 | .17205944+01 | .32175993+00 | .15521329+01 | .79341181+00 |
| .47385669+00 | .17208889+01 | .32063615+00 | .15612975+01 | .80067592+00 |
| .47516567+00 | .17211886+01 | .31951930+00 | .15706577+01 | .80807452+00 |
| .47647464+00 | .17214939+01 | .31840014+00 | .15802209+01 | .81561235+00 |
| .47778362+00 | .17218047+01 | .31727843+00 | .15899949+01 | .82329454+00 |
| .47909259+00 | .17221212+01 | .31615392+00 | .15999874+01 | .83112630+00 |
| .47996524+00 | .17223354+01 | .31540255+00 | .16067748+01 | .83643338+00 |
| .48083789+00 | .17225522+01 | .31464973+00 | .16136658+01 | .84181119+00 |
| .48171054+00 | .17227716+01 | .31389539+00 | .16206633+01 | .84726161+00 |
| .48258319+00 | .17229937+01 | .31313944+00 | .16277700+01 | .85278641+00 |
| .48345584+00 | .17232185+01 | .31238178+00 | .16349889+01 | .85838760+00 |
| .48432849+00 | .17234461+01 | .31162233+00 | .16423232+01 | .86406721+00 |
| .48474481+00 | .17235609+01 | .31124191+00 | .16460345+01 | .86693705+00 |
| .48520114+00 | .17236765+01 | .31086100+00 | .16497760+01 | .86982737+00 |
| .48563746+00 | .17237927+01 | .31047961+00 | .16535479+01 | .87273833+00 |
| .48607378+00 | .17239097+01 | .31009771+00 | .16573507+01 | .87567024+00 |
| .48651011+00 | .17240274+01 | .30971527+00 | .16611850+01 | .87862343+00 |
| .48694643+00 | .17241458+01 | .30933231+00 | .16650510+01 | .88159823+00 |
| .48738276+00 | .17242650+01 | .30894879+00 | .16689493+01 | .88459482+00 |
| .48781908+00 | .17243849+01 | .30856474+00 | .16728804+01 | .88761358+00 |
| .48825541+00 | .17245056+01 | .30818009+00 | .16768446+01 | .89065482+00 |
| .48869173+00 | .17246270+01 | .30779485+00 | .16808426+01 | .89371889+00 |
| .48886566+00 | .17246756+01 | .30764114+00 | .16824458+01 | .89494672+00 |

$$.73980698+00 = \Delta S/R$$

$$.10777171+02 = P_g/P_\infty$$

$$.30971981+01 = \rho_g/\rho_\infty$$

$$.34796518+01 = T_g/T_\infty$$

TABLE 170. CONICAL FLOWFIELD  $\theta_s = 22.5 \text{ DEG}$ ;  $M_\infty = 8.0$ 

| $\underline{u_s}$    | $\underline{M_\infty}$ | $\underline{\theta_s}$ | $\underline{\theta_w}$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .87490906+00         | .80000535+01           | .39269907+00           | .47477905+00           |                 |
| $\underline{\theta}$ | $\underline{M_1^*}$    | $\underline{\psi_1}$   | $\underline{x}$        | $\underline{r}$ |
| .39269907+00         | .17497853+01           | .39269907+00           | .12071069+01           | .50000000+00    |
| .39531706+00         | .17497972+01           | .39009730+00           | .12152719+01           | .50711357+00    |
| .39793506+00         | .17498324+01           | .38752672+00           | .12236515+01           | .51437569+00    |
| .40055305+00         | .17498902+01           | .38498550+00           | .12322542+01           | .52179220+00    |
| .40317104+00         | .17499700+01           | .38247190+00           | .12410894+01           | .52936944+00    |
| .40578903+00         | .17500713+01           | .37998423+00           | .12501669+01           | .53711406+00    |
| .40840703+00         | .17501936+01           | .37752090+00           | .12594974+01           | .54503317+00    |
| .41102502+00         | .17503364+01           | .37508033+00           | .12690921+01           | .55313428+00    |
| .41364301+00         | .17504994+01           | .37266101+00           | .12789627+01           | .56142534+00    |
| .41582467+00         | .17506504+01           | .37066808+00           | .12874084+01           | .56848588+00    |
| .41800633+00         | .17508150+01           | .36867204+00           | .12960627+01           | .57568952+00    |
| .42018799+00         | .17509930+01           | .36669608+00           | .13049337+01           | .58304181+00    |
| .42236965+00         | .17511845+01           | .36473138+00           | .13140303+01           | .59054856+00    |
| .42455131+00         | .17513891+01           | .36277714+00           | .13233619+01           | .59821606+00    |
| .42673297+00         | .17516068+01           | .36083256+00           | .13329385+01           | .60605077+00    |
| .42891463+00         | .17518377+01           | .35889686+00           | .13427707+01           | .61405978+00    |
| .43109629+00         | .17520815+01           | .35696923+00           | .13528696+01           | .62225042+00    |
| .43328416+00         | .17522860+01           | .35543241+00           | .13611488+01           | .62893899+00    |
| .43548695+00         | .17524987+01           | .35389985+00           | .13696129+01           | .63575310+00    |
| .43633228+00         | .17527198+01           | .35237113+00           | .13782689+01           | .64269727+00    |
| .43807761+00         | .17529492+01           | .35084584+00           | .13871239+01           | .64977627+00    |
| .43982293+00         | .17531870+01           | .34932356+00           | .13961856+01           | .65699502+00    |
| .44156826+00         | .17534332+01           | .34780388+00           | .14054622+01           | .66435885+00    |
| .44331359+00         | .17536879+01           | .34628436+00           | .14149621+01           | .67187332+00    |
| .44505892+00         | .17539511+01           | .34477056+00           | .14246943+01           | .67954425+00    |
| .44636792+00         | .17541540+01           | .34363458+00           | .14321518+01           | .68540393+00    |
| .44767691+00         | .17543619+01           | .34249913+00           | .14397496+01           | .69135784+00    |
| .44898591+00         | .17545746+01           | .34136400+00           | .14474924+01           | .69740900+00    |
| .45029490+00         | .17547923+01           | .34022902+00           | .14553847+01           | .70356037+00    |
| .45160390+00         | .17550149+01           | .33909396+00           | .14634315+01           | .70981514+00    |
| .45291290+00         | .17552425+01           | .33795864+00           | .14716379+01           | .71617662+00    |
| .45422189+00         | .17554752+01           | .33682283+00           | .14800095+01           | .72264832+00    |
| .45553087+00         | .17557134+01           | .33568634+00           | .14885516+01           | .72923379+00    |
| .45640352+00         | .17558751+01           | .33492820+00           | .14943441+01           | .73368919+00    |
| .45727617+00         | .17560392+01           | .33416958+00           | .15002169+01           | .73819805+00    |
| .45814882+00         | .17562057+01           | .33341041+00           | .15061721+01           | .74276169+00    |
| .45902147+00         | .17563745+01           | .33265062+00           | .15122115+01           | .74738124+00    |
| .45989412+00         | .17565456+01           | .33189014+00           | .15183372+01           | .75205810+00    |
| .46076677+00         | .17567193+01           | .33112889+00           | .15245514+01           | .75679360+00    |
| .46163942+00         | .17568953+01           | .33036681+00           | .15308562+01           | .76158913+00    |

TABLE 170. (Concluded)

| $M_{\infty} = .80000535+01$ |              |              | $\Theta_s = .39269907+00$ |              |
|-----------------------------|--------------|--------------|---------------------------|--------------|
| $\Theta$                    | $M_1^*$      | $\psi_1$     | $x$                       | $r$          |
| .46251207+00                | .17570738+01 | .32960381+00 | .15372539+01              | .76644619+00 |
| .46294839+00                | .17571639+01 | .32922194+00 | .15404884+01              | .76889823+00 |
| .46338472+00                | .17572547+01 | .32883982+00 | .15437468+01              | .77136617+00 |
| .46382104+00                | .17573462+01 | .32845742+00 | .15470298+01              | .77385030+00 |
| .46425737+00                | .17574382+01 | .32807475+00 | .15503375+01              | .77635077+00 |
| .46469369+00                | .17575309+01 | .32769179+00 | .15536703+01              | .77886778+00 |
| .46513002+00                | .17576243+01 | .32730853+00 | .15570285+01              | .78140155+00 |
| .46556634+00                | .17577182+01 | .32692496+00 | .15604124+01              | .78395231+00 |
| .46600267+00                | .17578128+01 | .32654107+00 | .15638224+01              | .78652022+00 |
| .46643899+00                | .17579081+01 | .32615684+00 | .15672587+01              | .78910553+00 |
| .46687531+00                | .17580041+01 | .32577227+00 | .15707220+01              | .79170852+00 |
| .46731164+00                | .17581007+01 | .32538735+00 | .15742123+01              | .79432934+00 |
| .46774796+00                | .17581979+01 | .32500207+00 | .15777301+01              | .79696824+00 |
| .46818429+00                | .17582958+01 | .32461642+00 | .15812757+01              | .79962547+00 |
| .46862061+00                | .17583944+01 | .32423037+00 | .15848497+01              | .80230132+00 |
| .46905694+00                | .17584937+01 | .32384393+00 | .15884524+01              | .80499597+00 |
| .46949326+00                | .17585937+01 | .32345708+00 | .15920841+01              | .80770972+00 |
| .46992959+00                | .17586943+01 | .32306980+00 | .15957451+01              | .81044275+00 |
| .47036591+00                | .17587957+01 | .32268208+00 | .15994361+01              | .81319539+00 |
| .47080224+00                | .17588977+01 | .32229392+00 | .16031574+01              | .81596790+00 |
| .47123856+00                | .17590005+01 | .32190529+00 | .16069095+01              | .81876057+00 |
| .47167489+00                | .17591039+01 | .32151619+00 | .16106926+01              | .82157362+00 |
| .47211121+00                | .17592081+01 | .32112660+00 | .16145075+01              | .82440741+00 |
| .47254753+00                | .17593130+01 | .32073649+00 | .16183543+01              | .82726215+00 |
| .47298386+00                | .17594186+01 | .32034589+00 | .16222338+01              | .83013819+00 |
| .47342018+00                | .17595249+01 | .31995475+00 | .16261463+01              | .83303588+00 |
| .47385651+00                | .17596320+01 | .31956306+00 | .16300924+01              | .83595547+00 |
| .47429283+00                | .17597398+01 | .31917082+00 | .16340725+01              | .83889727+00 |
| .47472916+00                | .17598484+01 | .31877800+00 | .16380872+01              | .84186164+00 |
| .47477905+00                | .17598609+01 | .31873304+00 | .16385485+01              | .84220202+00 |

$$.12423280+01 = \Delta S/R$$

$$.18129032+02 = P_s/P_{\infty}$$

$$.34608974+01 = \rho_s/\rho_{\infty}$$

$$.52382462+01 = T_s/T_{\infty}$$



TABLE 171. CONICAL FLOWFIELD  $\theta_s = 22.5 \text{ DEG}$ ;  $M_\infty = 10.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .88415708+00 | .99999945+01 | .39269907+00 | .46814787+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .39269907+00 | .17682810+01 | .39269907+00 | .12071068+01 | .50000000+00 |
| .39488073+00 | .17682894+01 | .39052870+00 | .12143168+01 | .50609306+00 |
| .39706239+00 | .17683142+01 | .38838013+00 | .12216914+01 | .51229770+00 |
| .39924405+00 | .17683550+01 | .38625221+00 | .12292362+01 | .51861771+00 |
| .40142571+00 | .17684115+01 | .38414384+00 | .12369574+01 | .52505723+00 |
| .40360737+00 | .17684833+01 | .38205397+00 | .12448615+01 | .53162052+00 |
| .40578903+00 | .17685701+01 | .37998157+00 | .12529556+01 | .53831217+00 |
| .40797069+00 | .17686717+01 | .37792563+00 | .12612468+01 | .54513692+00 |
| .41015235+00 | .17687878+01 | .37588519+00 | .12697426+01 | .55209977+00 |
| .41233401+00 | .17689183+01 | .37385930+00 | .12784513+01 | .55920603+00 |
| .41451567+00 | .17690628+01 | .37184704+00 | .12873816+01 | .56646144+00 |
| .41669733+00 | .17692213+01 | .36984749+00 | .12965427+01 | .57387190+00 |
| .41844266+00 | .17693580+01 | .36825639+00 | .13040440+01 | .57991610+00 |
| .42018799+00 | .17695035+01 | .36667241+00 | .13117045+01 | .58606701+00 |
| .42193332+00 | .17696577+01 | .36509508+00 | .13195295+01 | .59232810+00 |
| .42367865+00 | .17698205+01 | .36352896+00 | .13275249+01 | .59870324+00 |
| .42542398+00 | .17699920+01 | .36195859+00 | .13356969+01 | .60519632+00 |
| .42716930+00 | .17701721+01 | .36039855+00 | .13440518+01 | .61181153+00 |
| .42891463+00 | .17703608+01 | .35884337+00 | .13525964+01 | .61855318+00 |
| .43065996+00 | .17705581+01 | .35729261+00 | .13613379+01 | .62542590+00 |
| .43240529+00 | .17707639+01 | .35574582+00 | .13702838+01 | .63243456+00 |
| .43415062+00 | .17709784+01 | .35420255+00 | .13794422+01 | .63958427+00 |
| .43589595+00 | .17712015+01 | .35266233+00 | .13888216+01 | .64688047+00 |
| .43720494+00 | .17713745+01 | .35115089+00 | .13984064+01 | .65424521+00 |
| .43851394+00 | .17715524+01 | .35035672+00 | .14033244+01 | .65811194+00 |
| .43982293+00 | .17717352+01 | .34920560+00 | .14107799+01 | .66386256+00 |
| .44113193+00 | .17719229+01 | .34805534+00 | .14183772+01 | .66970677+00 |
| .44244093+00 | .17721156+01 | .34690572+00 | .14261209+01 | .67564742+00 |
| .44374992+00 | .17723133+01 | .34575654+00 | .14340156+01 | .68168753+00 |
| .44505892+00 | .17725161+01 | .34460758+00 | .14420665+01 | .68783034+00 |
| .44636792+00 | .17727239+01 | .34345862+00 | .14502787+01 | .69407914+00 |
| .44767691+00 | .17729369+01 | .34230944+00 | .14586578+01 | .70043742+00 |
| .44898591+00 | .17731550+01 | .34115981+00 | .14672097+01 | .70690887+00 |
| .45029489+00 | .17733787+01 | .34000953+00 | .14759402+01 | .71349726+00 |
| .45160387+00 | .17735309+01 | .33924219+00 | .14818630+01 | .71795645+00 |
| .45291284+00 | .17736855+01 | .33847435+00 | .14878701+01 | .72247073+00 |
| .45422182+00 | .17738424+01 | .33770596+00 | .14939636+01 | .72704133+00 |
| .45553079+00 | .17740018+01 | .33693694+00 | .15001455+01 | .73166964+00 |
| .45683977+00 | .17741636+01 | .33616719+00 | .15064182+01 | .73635701+00 |
| .45814875+00 | .17743279+01 | .33539666+00 | .15127839+01 | .74110490+00 |

TABLE 171. (Concluded)

| $M_{\infty} = .99999945+01$ |              | $\Theta_s = .39269907+00$ |              |              |
|-----------------------------|--------------|---------------------------|--------------|--------------|
| $\Theta$                    | $M_1^*$      | $\psi_1$                  | $x$          | $r$          |
| .45640343+00                | .17744946+01 | .33462526+00              | .15192449+01 | .74591475+00 |
| .45727608+00                | .17746639+01 | .33385290+00              | .15258038+01 | .75078820+00 |
| .45814873+00                | .17748357+01 | .33307949+00              | .15324631+01 | .75572679+00 |
| .45902138+00                | .17750100+01 | .33230495+00              | .15392254+01 | .76073218+00 |
| .45989403+00                | .17751870+01 | .33152920+00              | .15460936+01 | .76580612+00 |
| .46076668+00                | .17752764+01 | .33114084+00              | .15495683+01 | .76836938+00 |
| .46163933+00                | .17753666+01 | .33075213+00              | .15530706+01 | .77095047+00 |
| .46251203+00                | .17754573+01 | .33036308+00              | .15566008+01 | .77354959+00 |
| .46338463+00                | .17755488+01 | .32997367+00              | .15601593+01 | .77616700+00 |
| .46425728+00                | .17756409+01 | .32958388+00              | .15637465+01 | .77880298+00 |
| .46512993+00                | .17757338+01 | .32919870+00              | .15673628+01 | .78145770+00 |
| .46599258+00                | .17758273+01 | .32880312+00              | .15710087+01 | .78413153+00 |
| .46686523+00                | .17759215+01 | .32841213+00              | .15746844+01 | .78682464+00 |
| .46773788+00                | .17760163+01 | .32802071+00              | .15783905+01 | .78953728+00 |
| .46861053+00                | .17761119+01 | .32762885+00              | .15821275+01 | .79226983+00 |
| .46948318+00                | .17762082+01 | .32723455+00              | .15858958+01 | .79502252+00 |
| .47035583+00                | .17763052+01 | .32684377+00              | .15896958+01 | .79779562+00 |
| .47122848+00                | .17764028+01 | .32645051+00              | .15935279+01 | .80058938+00 |
| .47210113+00                | .17765013+01 | .32605677+00              | .15973927+01 | .80340414+00 |
| .47297378+00                | .17766005+01 | .32566251+00              | .16012905+01 | .80624015+00 |
| .47384643+00                | .17767003+01 | .32526774+00              | .16052221+01 | .80909783+00 |
| .47471908+00                | .17768009+01 | .32487243+00              | .16091878+01 | .81197742+00 |
| .47559173+00                | .17769023+01 | .32447458+00              | .16131881+01 | .81487921+00 |
| .47646438+00                | .17769958+01 | .32411318+00              | .16168863+01 | .81755921+00 |

$$.17181736+01 = \Delta S/R$$

$$.27577129+02 = P_s/P_{\infty}$$

$$.36798141+01 = \rho_s/\rho_{\infty}$$

$$.74941638+01 = T_s/T_{\infty}$$

TABLE 172. CONICAL FLOWFIELD  $\theta_s = 22.5 \text{ DEG}$ ;  $M_\infty = 12.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .89021438+00 | .12500000+02 | .39269907+00 | .46386329+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .39269907+00 | .17803954+01 | .39269907+00 | .12071068+01 | .50000000+00 |
| .39488073+00 | .17804038+01 | .39052869+00 | .12146178+01 | .50621851+00 |
| .39706239+00 | .17804288+01 | .38838005+00 | .12223057+01 | .51255528+00 |
| .39924405+00 | .17804698+01 | .38625195+00 | .12301767+01 | .51901454+00 |
| .40142571+00 | .17805267+01 | .38414324+00 | .12382380+01 | .52560081+00 |
| .40360737+00 | .17805990+01 | .38205281+00 | .12464968+01 | .53231888+00 |
| .40578903+00 | .17806865+01 | .37997957+00 | .12549609+01 | .53917372+00 |
| .40797069+00 | .17807889+01 | .37792249+00 | .12636383+01 | .54617061+00 |
| .41015235+00 | .17809059+01 | .37588054+00 | .12725379+01 | .55331521+00 |
| .41233401+00 | .17810374+01 | .37385272+00 | .12816686+01 | .56061331+00 |
| .41451567+00 | .17811831+01 | .37183806+00 | .12910405+01 | .56807135+00 |
| .41669733+00 | .17813429+01 | .36983560+00 | .13006637+01 | .57569592+00 |
| .41844266+00 | .17814809+01 | .36824177+00 | .13085507+01 | .58192024+00 |
| .42018799+00 | .17816277+01 | .36665466+00 | .13166116+01 | .58825950+00 |
| .42193332+00 | .17817834+01 | .36507379+00 | .13248527+01 | .59471768+00 |
| .42367865+00 | .17819478+01 | .36349867+00 | .13332809+01 | .60129913+00 |
| .42542398+00 | .17821210+01 | .36192884+00 | .13419029+01 | .60800824+00 |
| .42716930+00 | .17823031+01 | .36036882+00 | .13507263+01 | .61484976+00 |
| .42891463+00 | .17824938+01 | .35880813+00 | .13597588+01 | .62182862+00 |
| .43065996+00 | .17826933+01 | .35724628+00 | .13690088+01 | .62895007+00 |
| .43240529+00 | .17829016+01 | .35569279+00 | .13784851+01 | .63621974+00 |
| .43415062+00 | .17831188+01 | .35414216+00 | .13881969+01 | .64364342+00 |
| .43589595+00 | .17833448+01 | .35259390+00 | .13981542+01 | .65122737+00 |
| .43720494+00 | .17835201+01 | .35143396+00 | .14057895+01 | .65702447+00 |
| .43851394+00 | .17837004+01 | .35027485+00 | .14135734+01 | .66291837+00 |
| .43982293+00 | .17838858+01 | .34911634+00 | .14215108+01 | .66891214+00 |
| .44113193+00 | .17840763+01 | .34795821+00 | .14296069+01 | .67500903+00 |
| .44244093+00 | .17842720+01 | .34680824+00 | .14378672+01 | .68121240+00 |
| .44374992+00 | .17844728+01 | .34564219+00 | .14462971+01 | .68752578+00 |
| .44505892+00 | .17846789+01 | .34448381+00 | .14549027+01 | .69395289+00 |
| .44636792+00 | .17848902+01 | .34332487+00 | .14636903+01 | .70049769+00 |
| .44767689+00 | .17851074+01 | .34216916+00 | .14726663+01 | .70716415+00 |
| .44898586+00 | .17853301+01 | .34100438+00 | .14818378+01 | .71395668+00 |
| .45029484+00 | .17855581+01 | .33984224+00 | .14912122+01 | .72087993+00 |
| .45116749+00 | .17857133+01 | .33906661+00 | .14975783+01 | .72557040+00 |
| .45204014+00 | .17858709+01 | .33829017+00 | .15040406+01 | .73032262+00 |
| .45291279+00 | .17860310+01 | .33751284+00 | .15106015+01 | .73513815+00 |
| .45378543+00 | .17861937+01 | .33673454+00 | .15172635+01 | .74001852+00 |
| .45465808+00 | .17863589+01 | .33595518+00 | .15240292+01 | .74496542+00 |
| .45553073+00 | .17865268+01 | .33517466+00 | .15309017+01 | .74998061+00 |

TABLE 172. (Concluded)

$$M_{\infty} = .12500000+02$$

$$\Theta_s = .39269907+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .45640338+00 | .17866972+01 | .33439288+00 | .15378836+01 | .75506585+00 |
| .45727603+00 | .17868704+01 | .33360976+00 | .15449782+01 | .76022308+00 |
| .45814868+00 | .17870461+01 | .33282519+00 | .15521087+01 | .76545426+00 |
| .45902133+00 | .17872247+01 | .33203907+00 | .15595182+01 | .77076136+00 |
| .45989398+00 | .17874060+01 | .33125129+00 | .15669702+01 | .77614656+00 |
| .46033030+00 | .17874977+01 | .33085675+00 | .15707432+01 | .77886909+00 |
| .46076663+00 | .17875902+01 | .33046176+00 | .15745483+01 | .78161201+00 |
| .46120295+00 | .17876833+01 | .33006629+00 | .15783859+01 | .78437555+00 |
| .46163928+00 | .17877771+01 | .32967034+00 | .15822564+01 | .78716003+00 |
| .46207560+00 | .17878717+01 | .32927389+00 | .15861603+01 | .78996577+00 |
| .46251193+00 | .17879670+01 | .32887693+00 | .15900982+01 | .79279309+00 |
| .46294825+00 | .17880630+01 | .32847945+00 | .15940706+01 | .79564226+00 |
| .46338458+00 | .17881598+01 | .32808142+00 | .15980780+01 | .79851361+00 |
| .46382090+00 | .17882573+01 | .32768283+00 | .16021209+01 | .80140750+00 |
| .46386329+00 | .17882669+01 | .32764407+00 | .16025155+01 | .80168985+00 |

$$.22525752+01 = \Delta S/R$$

$$.42338037+02 = P_s/P_{\infty}$$

$$.38432159+01 = \rho_s/\rho_{\infty}$$

$$.11016305+02 = T_s/T_{\infty}$$

/ TABLE 173. CONICAL FLOWFIELD  $\theta_s = 22.5 \text{ DEG}$ ;  $M_\infty = 15.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .89355164+00 | .15000111+02 | .39269907+00 | .46152193+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .39269907+00 | .17870698+01 | .39269907+00 | .12071068+01 | .50000000+00 |
| .39444440+00 | .17870752+01 | .39096098+00 | .12132416+01 | .50502373+00 |
| .39618973+00 | .17870913+01 | .38923695+00 | .12194935+01 | .51012515+00 |
| .39793506+00 | .17871179+01 | .38752633+00 | .12258659+01 | .51530655+00 |
| .39968038+00 | .17871547+01 | .38582851+00 | .12323625+01 | .52057029+00 |
| .40142571+00 | .17872016+01 | .38414288+00 | .12389872+01 | .52591882+00 |
| .40317104+00 | .17872584+01 | .38246886+00 | .12457438+01 | .53135473+00 |
| .40491637+00 | .17873251+01 | .38080589+00 | .12526367+01 | .53688076+00 |
| .40666170+00 | .17874013+01 | .37915841+00 | .12596702+01 | .54249768+00 |
| .40840703+00 | .17874871+01 | .37751087+00 | .12668490+01 | .54821446+00 |
| .41015235+00 | .17875823+01 | .37587774+00 | .12741778+01 | .55402824+00 |
| .41189768+00 | .17876868+01 | .37425349+00 | .12816617+01 | .55994421+00 |
| .41364301+00 | .17878005+01 | .37263762+00 | .12893061+01 | .56596578+00 |
| .41538834+00 | .17879233+01 | .37102960+00 | .12971166+01 | .57209656+00 |
| .41713367+00 | .17880552+01 | .36942894+00 | .13050991+01 | .57834027+00 |
| .41887899+00 | .17881960+01 | .36783513+00 | .13132598+01 | .58470087+00 |
| .42018799+00 | .17883075+01 | .36664398+00 | .13195010+01 | .58955048+00 |
| .42149699+00 | .17884241+01 | .36545619+00 | .13258492+01 | .59447003+00 |
| .42280598+00 | .17885456+01 | .36427155+00 | .13323071+01 | .59946137+00 |
| .42411498+00 | .17886721+01 | .36308986+00 | .13388781+01 | .60452658+00 |
| .42542398+00 | .17888036+01 | .36191092+00 | .13455653+01 | .60966764+00 |
| .42673297+00 | .17889401+01 | .36073450+00 | .13523721+01 | .61488671+00 |
| .42804197+00 | .17890815+01 | .35956040+00 | .13593022+01 | .62018605+00 |
| .42935096+00 | .17892280+01 | .35838841+00 | .13663591+01 | .62556799+00 |
| .43065996+00 | .17893794+01 | .35721832+00 | .13735469+01 | .63103497+00 |
| .43196896+00 | .17895359+01 | .35604990+00 | .13808695+01 | .63658951+00 |
| .43327795+00 | .17896974+01 | .35488295+00 | .13883313+01 | .64223431+00 |
| .43458695+00 | .17898639+01 | .35371723+00 | .13959367+01 | .64797220+00 |
| .43589595+00 | .17900355+01 | .35255254+00 | .14036904+01 | .65380599+00 |
| .43720494+00 | .17902121+01 | .35138864+00 | .14115971+01 | .65973881+00 |
| .43851394+00 | .17903939+01 | .35022530+00 | .14196622+01 | .66577382+00 |
| .43982294+00 | .17905800+01 | .34944994+00 | .14251295+01 | .66985561+00 |
| .44025927+00 | .17906443+01 | .34867465+00 | .14306711+01 | .67398529+00 |
| .44113193+00 | .17907730+01 | .34789937+00 | .14362890+01 | .67816104+00 |
| .44200459+00 | .17909040+01 | .34712403+00 | .14419846+01 | .68239287+00 |
| .44287726+00 | .17910374+01 | .34634854+00 | .14477600+01 | .68667294+00 |
| .44374992+00 | .17911730+01 | .34557283+00 | .14536170+01 | .69100545+00 |
| .44462258+00 | .17913113+01 | .34479685+00 | .14595576+01 | .69539162+00 |
| .44549523+00 | .17914521+01 | .34402051+00 | .14655838+01 | .69983263+00 |
| .44636788+00 | .17915954+01 | .34324372+00 | .14716978+01 | .70432989+00 |



TABLE 173. (Concluded)

| $M_{\infty} = .15000111+02$ |              | $\Theta_s = .39269907+00$ |              |              |
|-----------------------------|--------------|---------------------------|--------------|--------------|
| $\Theta$                    | $M_1^*$      | $\psi_1$                  | $x$          | $r$          |
| .44724053+00                | .17917410+01 | .34246640+00              | .14779017+01 | .70888473+00 |
| .44811318+00                | .17918892+01 | .34168848+00              | .14841979+01 | .71349856+00 |
| .44898583+00                | .17920397+01 | .34090985+00              | .14905887+01 | .71817284+00 |
| .44985848+00                | .17921928+01 | .34013045+00              | .14970765+01 | .72290911+00 |
| .45073112+00                | .17923484+01 | .33935018+00              | .15036639+01 | .72770882+00 |
| .45160377+00                | .17925066+01 | .33856895+00              | .15103536+01 | .73257376+00 |
| .45240410+00                | .17925866+01 | .33817795+00              | .15137377+01 | .73503119+00 |
| .45247642+00                | .17926673+01 | .33778668+00              | .15171483+01 | .73750550+00 |
| .45291275+00                | .17927487+01 | .33739512+00              | .15205859+01 | .73999702+00 |
| .45334907+00                | .17928307+01 | .33700326+00              | .15240508+01 | .74250586+00 |
| .45378540+00                | .17929133+01 | .33661110+00              | .15275435+01 | .74503235+00 |
| .45422172+00                | .17929966+01 | .33621861+00              | .15310642+01 | .74757665+00 |
| .45465805+00                | .17930806+01 | .33582678+00              | .15346135+01 | .75013908+00 |
| .45509437+00                | .17931653+01 | .33543261+00              | .15381916+01 | .75271978+00 |
| .45553070+00                | .17932506+01 | .33503908+00              | .15417990+01 | .75531907+00 |
| .45596702+00                | .17933366+01 | .33464617+00              | .15454360+01 | .75793715+00 |
| .45640334+00                | .17934233+01 | .33425088+00              | .15491032+01 | .76057436+00 |
| .45683967+00                | .17935107+01 | .33385619+00              | .15528010+01 | .76323089+00 |
| .45727599+00                | .17935988+01 | .33346109+00              | .15565298+01 | .76590706+00 |
| .45771232+00                | .17936876+01 | .33306656+00              | .15602900+01 | .76860315+00 |
| .45814864+00                | .17937771+01 | .33266959+00              | .15640822+01 | .77131943+00 |
| .45858497+00                | .17938672+01 | .33227316+00              | .15679068+01 | .77405619+00 |
| .45902129+00                | .17939581+01 | .33187627+00              | .15717643+01 | .77681371+00 |
| .45945762+00                | .17940498+01 | .33147889+00              | .15756551+01 | .77959228+00 |
| .45989394+00                | .17941421+01 | .33108101+00              | .15795798+01 | .78239220+00 |
| .46033027+00                | .17942352+01 | .33068262+00              | .15835389+01 | .78521384+00 |
| .46076659+00                | .17943290+01 | .33028369+00              | .15875329+01 | .78805750+00 |
| .46120292+00                | .17944236+01 | .32988423+00              | .15915624+01 | .79092353+00 |
| .46152193+00                | .17944932+01 | .32959180+00              | .15945313+01 | .79303331+00 |

$$.27220446+01 = \Delta S/R$$

$$.60378985+02 = P_s/P_{\infty}$$

$$.39411988+01 = \rho_s/\rho_{\infty}$$

$$.15319955+02 = T_s/T_{\infty}$$

TABLE 174. CONICAL FLOWFIELD  $\theta_s = 22.5 \text{ DEG}$ ;  $M_\infty = 17.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .89558002+00 | .17500000+02 | .39269907+00 | .46010541+00 |              |
| $e$          | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .39269907+00 | .17911264+01 | .39269907+00 | .12071068+01 | .50000000+00 |
| .39444440+00 | .17911319+01 | .39096098+00 | .12133297+01 | .50506038+00 |
| .39618973+00 | .17911460+01 | .38923693+00 | .12196726+01 | .51020009+00 |
| .39793506+00 | .17911747+01 | .38752628+00 | .12261393+01 | .51542146+00 |
| .39968038+00 | .17912116+01 | .38582839+00 | .12327334+01 | .52072696+00 |
| .40142571+00 | .17912586+01 | .38414264+00 | .12394590+01 | .52611911+00 |
| .40317104+00 | .17913156+01 | .38246847+00 | .12463202+01 | .53160060+00 |
| .40491637+00 | .17913824+01 | .38080527+00 | .12533215+01 | .53717425+00 |
| .40666170+00 | .17914589+01 | .37915248+00 | .12604674+01 | .54284297+00 |
| .40840703+00 | .17915449+01 | .37750956+00 | .12677626+01 | .54860985+00 |
| .41015235+00 | .17916403+01 | .37587595+00 | .12752123+01 | .55447807+00 |
| .41189768+00 | .17917451+01 | .37425113+00 | .12828217+01 | .56045099+00 |
| .41364301+00 | .17918591+01 | .37263456+00 | .12905965+01 | .56653221+00 |
| .41538834+00 | .17919822+01 | .37102573+00 | .12985424+01 | .57272538+00 |
| .41713367+00 | .17921145+01 | .36942412+00 | .13066657+01 | .57903448+00 |
| .41887899+00 | .17922557+01 | .36782922+00 | .13149729+01 | .58546360+00 |
| .42018799+00 | .17923676+01 | .36663714+00 | .13213280+01 | .59036676+00 |
| .42149699+00 | .17924845+01 | .36544834+00 | .13277935+01 | .59534179+00 |
| .42280598+00 | .17926065+01 | .36426259+00 | .13343724+01 | .60039064+00 |
| .42411498+00 | .17927334+01 | .36307970+00 | .13410681+01 | .60551542+00 |
| .42542398+00 | .17928654+01 | .36189944+00 | .13478840+01 | .61071827+00 |
| .42673297+00 | .17930024+01 | .36072159+00 | .13548238+01 | .61600143+00 |
| .42804197+00 | .17931444+01 | .35954594+00 | .13618911+01 | .62136727+00 |
| .42935096+00 | .17932914+01 | .35837228+00 | .13690900+01 | .62681826+00 |
| .43065996+00 | .17934435+01 | .35720039+00 | .13764244+01 | .63235693+00 |
| .43196896+00 | .17936006+01 | .35603004+00 | .13838986+01 | .63798594+00 |
| .43327795+00 | .17937626+01 | .35486100+00 | .13915172+01 | .64370809+00 |
| .43458695+00 | .17939300+01 | .35369306+00 | .13992850+01 | .64952639+00 |
| .43589595+00 | .17941024+01 | .35252598+00 | .14072067+01 | .65544381+00 |
| .43720494+00 | .17942799+01 | .35135953+00 | .14152876+01 | .66146360+00 |
| .43851394+00 | .17944626+01 | .35019347+00 | .14235330+01 | .66758911+00 |
| .43938660+00 | .17945873+01 | .34941619+00 | .14291244+01 | .67173333+00 |
| .44025927+00 | .17947143+01 | .34863891+00 | .14347932+01 | .67592717+00 |
| .44113193+00 | .17948437+01 | .34786155+00 | .14405413+01 | .68017182+00 |
| .44200459+00 | .17949754+01 | .34708402+00 | .14463705+01 | .68446840+00 |
| .44287726+00 | .17951095+01 | .34630627+00 | .14522828+01 | .68881810+00 |
| .44374992+00 | .17952462+01 | .34552822+00 | .14582802+01 | .69322216+00 |
| .44462257+00 | .17953854+01 | .34474979+00 | .14643649+01 | .69768196+00 |
| .44549521+00 | .17955271+01 | .34397089+00 | .14705390+01 | .70219879+00 |
| .44636786+00 | .17956712+01 | .34319144+00 | .14768048+01 | .70677400+00 |

TABLE 174. (Concluded)

$$M_{\infty} = .17500000+02$$

$$\Theta_s = .39269907+00$$

| $\underline{\Theta}$ | $\underline{M_1^*}$ | $\underline{\psi_1}$ | $\underline{x}$ | $\underline{r}$ |
|----------------------|---------------------|----------------------|-----------------|-----------------|
| .44724051+00         | .17958178+01        | .34241135+00         | .14831647+01    | .71140914+00    |
| .44811316+00         | .17959669+01        | .34163054+00         | .14896212+01    | .71610567+00    |
| .44898581+00         | .17961185+01        | .34084891+00         | .14961765+01    | .72086509+00    |
| .44985846+00         | .17962726+01        | .34006638+00         | .15028335+01    | .72568899+00    |
| .45073111+00         | .17964293+01        | .33928286+00         | .15095948+01    | .73057913+00    |
| .45160376+00         | .17965886+01        | .33849826+00         | .15164634+01    | .73553719+00    |
| .45204008+00         | .17966692+01        | .33810552+00         | .15199388+01    | .73804224+00    |
| .45247641+00         | .17967505+01        | .33771247+00         | .15234422+01    | .74056503+00    |
| .45291273+00         | .17968325+01        | .33731910+00         | .15269738+01    | .74310565+00    |
| .45334906+00         | .17969151+01        | .33692539+00         | .15305341+01    | .74566445+00    |
| .45378538+00         | .17969984+01        | .33653135+00         | .15341235+01    | .74824159+00    |
| .45422171+00         | .17970824+01        | .33613694+00         | .15377425+01    | .75083742+00    |
| .45465803+00         | .17971670+01        | .33574216+00         | .15413914+01    | .75345219+00    |
| .45509436+00         | .17972524+01        | .33534699+00         | .15450708+01    | .75608609+00    |
| .45553068+00         | .17973384+01        | .33495143+00         | .15487808+01    | .75873941+00    |
| .45596701+00         | .17974252+01        | .33455545+00         | .15525221+01    | .76141240+00    |
| .45640333+00         | .17975126+01        | .33415904+00         | .15562952+01    | .76410543+00    |
| .45683965+00         | .17976007+01        | .33376219+00         | .15601006+01    | .76681875+00    |
| .45727598+00         | .17976895+01        | .33336489+00         | .15639385+01    | .76955258+00    |
| .45771230+00         | .17977791+01        | .33296712+00         | .15678095+01    | .77230725+00    |
| .45814863+00         | .17978694+01        | .33256886+00         | .15717143+01    | .77508311+00    |
| .45858495+00         | .17979603+01        | .33217010+00         | .15756532+01    | .77788044+00    |
| .45902128+00         | .17980521+01        | .33177083+00         | .15796268+01    | .78069959+00    |
| .45945760+00         | .17981446+01        | .33137103+00         | .15836357+01    | .78354084+00    |
| .45989393+00         | .17982378+01        | .33097067+00         | .15876804+01    | .78640454+00    |
| .46010541+00         | .17982832+01        | .33077642+00         | .15896538+01    | .78780075+00    |

$$.31361937+01 = \Delta S/R$$

$$.81697615+02 = P_s/P_{\infty}$$

$$.40038123+01 = \rho_s/\rho_{\infty}$$

$$.20404957+02 = T_s/T_{\infty}$$

TABLE 175. CONICAL FLOWFIELD  $\theta_s = 22.5 \text{ DEG}$ ;  $M_\infty = 20.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .89690313+00 | .19999994+02 | .39269907+00 | .45918399+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .39269907+00 | .17937726+01 | .39269907+00 | .12071068+01 | .50000000+00 |
| .39444440+00 | .17937781+01 | .39096098+00 | .12133884+01 | .50508481+00 |
| .39618973+00 | .17937942+01 | .38923492+00 | .12197920+01 | .51025004+00 |
| .39793506+00 | .17938209+01 | .38752624+00 | .12263215+01 | .51549808+00 |
| .39968038+00 | .17938579+01 | .38582831+00 | .12329808+01 | .52083144+00 |
| .40142571+00 | .17939050+01 | .38414249+00 | .12397738+01 | .52625272+00 |
| .40317104+00 | .17939620+01 | .38246820+00 | .12467049+01 | .53176468+00 |
| .40491637+00 | .17940289+01 | .38080484+00 | .12537786+01 | .53737018+00 |
| .40666170+00 | .17941055+01 | .37915186+00 | .12609996+01 | .54307219+00 |
| .40840703+00 | .17941917+01 | .37750867+00 | .12683728+01 | .54887391+00 |
| .41015235+00 | .17942873+01 | .37587475+00 | .12759035+01 | .55477860+00 |
| .41189768+00 | .17943922+01 | .37424953+00 | .12835971+01 | .56078973+00 |
| .41364301+00 | .17945064+01 | .37263250+00 | .12914592+01 | .56691089+00 |
| .41538834+00 | .17946298+01 | .37102311+00 | .12994958+01 | .57314590+00 |
| .41713367+00 | .17947623+01 | .36942086+00 | .13077137+01 | .57949889+00 |
| .41887899+00 | .17949039+01 | .36782523+00 | .13161191+01 | .58597394+00 |
| .42018799+00 | .17950160+01 | .36663253+00 | .13225506+01 | .59091302+00 |
| .42149699+00 | .17951332+01 | .36544304+00 | .13290948+01 | .59592527+00 |
| .42280598+00 | .17952554+01 | .36425655+00 | .13357550+01 | .60101273+00 |
| .42411498+00 | .17953826+01 | .36307284+00 | .13425347+01 | .60617760+00 |
| .42542398+00 | .17955149+01 | .36189169+00 | .13494372+01 | .61142197+00 |
| .42673297+00 | .17956522+01 | .36071287+00 | .13564663+01 | .61674823+00 |
| .42804197+00 | .17957946+01 | .35953619+00 | .13636260+01 | .62215881+00 |
| .42935096+00 | .17959420+01 | .35836139+00 | .13709203+01 | .62765624+00 |
| .43065996+00 | .17960945+01 | .35718828+00 | .13783534+01 | .63324316+00 |
| .43196896+00 | .17962521+01 | .35601662+00 | .13859298+01 | .63892233+00 |
| .43327795+00 | .17964147+01 | .35484618+00 | .13936541+01 | .64469660+00 |
| .43458695+00 | .17965825+01 | .35367673+00 | .14015313+01 | .65056911+00 |
| .43589595+00 | .17967554+01 | .35250804+00 | .14095664+01 | .65654293+00 |
| .43720494+00 | .17969335+01 | .35133986+00 | .14177649+01 | .66262144+00 |
| .43851394+00 | .17971167+01 | .35017195+00 | .14261323+01 | .66880807+00 |
| .43982294+00 | .17972949+01 | .34939338+00 | .14318074+01 | .67299441+00 |
| .44025927+00 | .17973693+01 | .34861474+00 | .14375619+01 | .67723154+00 |
| .44113193+00 | .17974992+01 | .34783596+00 | .14433981+01 | .68152074+00 |
| .44200459+00 | .17976314+01 | .34705697+00 | .14493178+01 | .68586314+00 |
| .44287725+00 | .17977661+01 | .34627769+00 | .14553227+01 | .69025993+00 |
| .44374990+00 | .17979035+01 | .34549805+00 | .14614153+01 | .69471249+00 |
| .44462255+00 | .17980433+01 | .34471795+00 | .14675976+01 | .69922213+00 |
| .44549520+00 | .17981855+01 | .34393731+00 | .14738721+01 | .70379033+00 |
| .44636785+00 | .17983303+01 | .34315605+00 | .14802409+01 | .70841844+00 |

TABLE 175. (Concluded)

| $M_{\infty} = .19999994+02$ |                     |                      | $\Theta_s = .39269907+00$ |                 |
|-----------------------------|---------------------|----------------------|---------------------------|-----------------|
| $\underline{\Theta}$        | $\underline{M_1^*}$ | $\underline{\psi_1}$ | $\underline{x}$           | $\underline{r}$ |
| .44724050+00                | .17984775+01        | .34237407+00         | .14867067+01              | .71310803+00    |
| .44811315+00                | .17986272+01        | .34159129+00         | .14932717+01              | .71786056+00    |
| .44898580+00                | .17987795+01        | .34080762+00         | .14999389+01              | .72267779+00    |
| .44985845+00                | .17989344+01        | .34002297+00         | .15067110+01              | .72756132+00    |
| .45073109+00                | .17990918+01        | .33923724+00         | .15135906+01              | .73251286+00    |
| .45160374+00                | .17992519+01        | .33845033+00         | .15205809+01              | .73753431+00    |
| .45204007+00                | .17993329+01        | .33805640+00         | .15241185+01              | .74007180+00    |
| .45247639+00                | .17994146+01        | .33766214+00         | .15276850+01              | .74262746+00    |
| .45291272+00                | .17994969+01        | .33726754+00         | .15312806+01              | .74520156+00    |
| .45334904+00                | .17995800+01        | .33687258+00         | .15349060+01              | .74779434+00    |
| .45378537+00                | .17996637+01        | .33647725+00         | .15385614+01              | .75040609+00    |
| .45422169+00                | .17997481+01        | .33608153+00         | .15422473+01              | .75303700+00    |
| .45465802+00                | .17998332+01        | .33568542+00         | .15459643+01              | .75568742+00    |
| .45509434+00                | .17999191+01        | .33528889+00         | .15497125+01              | .75835750+00    |
| .45553067+00                | .18000055+01        | .33489193+00         | .15534927+01              | .76104767+00    |
| .45596699+00                | .18000927+01        | .33449454+00         | .15573052+01              | .76375816+00    |
| .45640332+00                | .18001807+01        | .33409669+00         | .15611506+01              | .76648925+00    |
| .45683964+00                | .18002693+01        | .33369837+00         | .15650292+01              | .76924124+00    |
| .45727596+00                | .18003587+01        | .33329957+00         | .15689416+01              | .77201440+00    |
| .45771229+00                | .18004487+01        | .33290026+00         | .15728885+01              | .77480914+00    |
| .45814861+00                | .18005395+01        | .33250044+00         | .15768702+01              | .77762569+00    |
| .45858494+00                | .18006311+01        | .33210010+00         | .15808873+01              | .78046443+00    |
| .45902126+00                | .18007234+01        | .33169919+00         | .15849403+01              | .78332561+00    |
| .45945759+00                | .18007580+01        | .33154953+00         | .15864611+01              | .78439847+00    |

$$.35047926+01 = \Delta S/R$$

$$.10629692+03 = P_s/P_{\infty}$$

$$.40459918+01 = \rho_s/\rho_{\infty}$$

$$.26272156+02 = T_s/T_{\infty}$$



TABLE 176. CONICAL FLOWFIELD  $\theta_s = 22.5 \text{ DEG}$ ;  $M_\infty = 22.5$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .89781337+00 | .22499923+02 | .39269907+00 | .45855136+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .39269907+00 | .17955931+01 | .39269907+00 | .12071068+01 | .50000000+00 |
| .39444440+00 | .17955985+01 | .39096098+00 | .12134294+01 | .50510188+00 |
| .39618973+00 | .17956147+01 | .38923692+00 | .12198755+01 | .51020494+00 |
| .39793506+00 | .17956414+01 | .38752622+00 | .12264489+01 | .51555163+00 |
| .39968038+00 | .17956785+01 | .38582825+00 | .12331536+01 | .52090447+00 |
| .40142571+00 | .17957256+01 | .38414238+00 | .12399938+01 | .52634612+00 |
| .40317104+00 | .17957827+01 | .38246801+00 | .12469738+01 | .53187938+00 |
| .40491637+00 | .17958497+01 | .38080455+00 | .12540982+01 | .53750715+00 |
| .40666170+00 | .17959264+01 | .37915142+00 | .12613718+01 | .54323247+00 |
| .40840703+00 | .17960126+01 | .37750805+00 | .12687995+01 | .54905856+00 |
| .41015235+00 | .17961083+01 | .37587390+00 | .12763868+01 | .55498875+00 |
| .41189768+00 | .17962134+01 | .37424841+00 | .12841391+01 | .56102655+00 |
| .41364301+00 | .17963278+01 | .37263104+00 | .12920624+01 | .56717569+00 |
| .41538834+00 | .17964513+01 | .37102128+00 | .13001627+01 | .57344005+00 |
| .41713367+00 | .17965840+01 | .36941858+00 | .13084467+01 | .57982374+00 |
| .41887899+00 | .17967257+01 | .36782242+00 | .13169211+01 | .58633102+00 |
| .42062432+00 | .17968380+01 | .36622928+00 | .13234062+01 | .59129532+00 |
| .42149699+00 | .17969553+01 | .36453932+00 | .13300058+01 | .59633372+00 |
| .42280598+00 | .17970777+01 | .36285230+00 | .13367229+01 | .60144824+00 |
| .42411498+00 | .17972052+01 | .36106801+00 | .13435614+01 | .60664117+00 |
| .42542398+00 | .17973377+01 | .36188623+00 | .13505247+01 | .61191471+00 |
| .42673297+00 | .17974752+01 | .36070674+00 | .13576166+01 | .61727124+00 |
| .42804197+00 | .17976179+01 | .35952931+00 | .13648412+01 | .62271325+00 |
| .42935096+00 | .17977655+01 | .35835373+00 | .13722025+01 | .62824331+00 |
| .43065996+00 | .17979183+01 | .35717976+00 | .13797051+01 | .63386417+00 |
| .43196896+00 | .17980761+01 | .35600717+00 | .13873533+01 | .63957859+00 |
| .43327795+00 | .17982391+01 | .35483574+00 | .13951521+01 | .64538959+00 |
| .43458695+00 | .17984072+01 | .35366523+00 | .14031064+01 | .65130024+00 |
| .43589595+00 | .17985805+01 | .35249539+00 | .14112213+01 | .65731374+00 |
| .43720494+00 | .17987590+01 | .35132600+00 | .14195026+01 | .66343358+00 |
| .43851394+00 | .17989427+01 | .35015679+00 | .14279559+01 | .66966330+00 |
| .43982294+00 | .17990681+01 | .34937730+00 | .14336901+01 | .67387934+00 |
| .44025927+00 | .17991958+01 | .34859771+00 | .14395053+01 | .67814704+00 |
| .44113193+00 | .17993260+01 | .34781793+00 | .14454035+01 | .68246762+00 |
| .44200459+00 | .17994585+01 | .34703789+00 | .14513869+01 | .68684232+00 |
| .44287724+00 | .17995938+01 | .34625754+00 | .14574572+01 | .69127231+00 |
| .44374989+00 | .17997316+01 | .34547677+00 | .14636170+01 | .69575907+00 |
| .44462254+00 | .17998717+01 | .34469549+00 | .14698683+01 | .70030394+00 |
| .44549519+00 | .18000144+01 | .34391363+00 | .14762134+01 | .70490831+00 |
| .44636784+00 | .18001595+01 | .34313108+00 | .14826550+01 | .70957378+00 |

TABLE 176. (Concluded)

| $M_{\infty} = .22499923+02$ |              |              | $\Theta_s = .39269907+00$ |              |
|-----------------------------|--------------|--------------|---------------------------|--------------|
| $\Theta$                    | $M_1^*$      | $\psi_1$     | $x$                       | $r$          |
| .44724049+00                | .18003072+01 | .34234777+00 | .14891956+01              | .71430184+00 |
| .44811314+00                | .18004573+01 | .34156360+00 | .14958376+01              | .71909405+00 |
| .44898579+00                | .18006101+01 | .34077849+00 | .15025838+01              | .72395211+00 |
| .44985844+00                | .18007654+01 | .33999233+00 | .15094372+01              | .72887776+00 |
| .45073109+00                | .18009234+01 | .33920503+00 | .15164005+01              | .73387271+00 |
| .45160374+00                | .18010840+01 | .33841649+00 | .15234770+01              | .73893897+00 |
| .45240006+00                | .18011653+01 | .33802172+00 | .15270586+01              | .74149940+00 |
| .45247639+00                | .18012473+01 | .33762661+00 | .15306697+01              | .74407835+00 |
| .45291271+00                | .18013299+01 | .33723113+00 | .15343107+01              | .74667615+00 |
| .45334904+00                | .18014133+01 | .33683528+00 | .15379821+01              | .74929298+00 |
| .45378536+00                | .18014974+01 | .33643904+00 | .15416843+01              | .75192918+00 |
| .45422168+00                | .18015821+01 | .33604239+00 | .15454176+01              | .75458495+00 |
| .45465801+00                | .18016675+01 | .33564533+00 | .15491826+01              | .75726055+00 |
| .45509433+00                | .18017536+01 | .33524784+00 | .15529798+01              | .75995638+00 |
| .45553066+00                | .18018405+01 | .33484990+00 | .15568097+01              | .76267266+00 |
| .45596698+00                | .18019280+01 | .33445150+00 | .15606727+01              | .76540969+00 |
| .45640331+00                | .18020163+01 | .33405263+00 | .15645692+01              | .76816773+00 |
| .45683963+00                | .18021052+01 | .33365326+00 | .15685000+01              | .77094717+00 |
| .45727596+00                | .18021950+01 | .33325339+00 | .15724653+01              | .77374826+00 |
| .45771228+00                | .18022854+01 | .33285300+00 | .15764660+01              | .77657141+00 |
| .45814861+00                | .18023766+01 | .33245207+00 | .15805022+01              | .77941679+00 |
| .45858513+00                | .18024614+01 | .33208149+00 | .15842602+01              | .78206343+00 |

$$.38358878+01 = \Delta S/R$$

$$.13417484+03 = P_s/P_{\infty}$$

$$.40756339+01 = \rho_s/\rho_{\infty}$$

$$.32921221+02 = T_s/T_{\infty}$$

TABLE 177. CONICAL FLOWFIELD  $\theta_s = 22.5 \text{ DEG}$ ;  $M_\infty = 25.0$ 

| $\underline{u_s}$    | $\underline{M_\infty}$ | $\underline{\theta_s}$ | $\underline{\theta_w}$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .89846601+00         | .24999898+02           | .39269907+00           | .45809837+00           |                 |
| $\underline{\theta}$ | $\underline{M_1^*}$    | $\underline{\psi_1}$   | $\underline{x}$        | $\underline{r}$ |
| .39269907+00         | .17968983+01           | .39269907+00           | .12071068+01           | .50000000+00    |
| .39444440+00         | .17969038+01           | .39096098+00           | .12134591+01           | .50511425+00    |
| .39618973+00         | .17969200+01           | .38923691+00           | .12199360+01           | .51031025+00    |
| .39793506+00         | .17969467+01           | .38752620+00           | .12265413+01           | .51559044+00    |
| .39968038+00         | .17969837+01           | .38582821+00           | .12332789+01           | .52095739+00    |
| .40142571+00         | .17970309+01           | .38414230+00           | .12401533+01           | .52641380+00    |
| .40317104+00         | .17970881+01           | .38246787+00           | .12471687+01           | .53196250+00    |
| .40491637+00         | .17971552+01           | .38080433+00           | .12543298+01           | .53760640+00    |
| .40666170+00         | .17972319+01           | .37915110+00           | .12616415+01           | .54334863+00    |
| .40840703+00         | .17973182+01           | .37750760+00           | .12691089+01           | .54919241+00    |
| .41015235+00         | .17974140+01           | .37587328+00           | .12767372+01           | .55514112+00    |
| .41189768+00         | .17975192+01           | .37424759+00           | .12845322+01           | .56119830+00    |
| .41364301+00         | .17976336+01           | .37262999+00           | .12924999+01           | .56736776+00    |
| .41538834+00         | .17977573+01           | .37101994+00           | .13006464+01           | .57365339+00    |
| .41713367+00         | .17978901+01           | .36941691+00           | .13089785+01           | .58005939+00    |
| .41887899+00         | .17980320+01           | .36782037+00           | .13175029+01           | .58659005+00    |
| .42062432+00         | .17981844+01           | .36622692+00           | .13262270+01           | .59327265+00    |
| .42236965+00         | .17983474+01           | .36463660+00           | .13351567+01           | .59999005+00    |
| .42411498+00         | .17985210+01           | .36304449+00           | .13443065+01           | .60677759+00    |
| .42586031+00         | .17986946+01           | .36145226+00           | .13536140+01           | .61362234+00    |
| .42760564+00         | .17988782+01           | .36000227+00           | .13631316+01           | .62052887+00    |
| .42935097+00         | .17990725+01           | .35859243+00           | .13728034+01           | .62749763+00    |
| .43109630+00         | .17992770+01           | .35722354+00           | .13826868+01           | .63452885+00    |
| .43284163+00         | .17994917+01           | .35590028+00           | .13927375+01           | .64162258+00    |
| .43458696+00         | .17997166+01           | .35462813+00           | .14029907+01           | .64877930+00    |
| .43633229+00         | .17999517+01           | .35340684+00           | .14134823+01           | .65599884+00    |
| .43807762+00         | .18001970+01           | .35224617+00           | .14242338+01           | .66328136+00    |
| .43982295+00         | .18004525+01           | .35114573+00           | .14352813+01           | .67062785+00    |
| .44156828+00         | .18007182+01           | .34993657+00           | .14465861+01           | .67803935+00    |
| .44331361+00         | .18009941+01           | .34885852+00           | .14581914+01           | .68551689+00    |
| .44505894+00         | .18012802+01           | .34780477+00           | .14699995+01           | .69306055+00    |
| .44680427+00         | .18015765+01           | .34682282+00           | .14820612+01           | .70067027+00    |
| .44854960+00         | .18018830+01           | .34591233+00           | .14943279+01           | .70834606+00    |
| .45029493+00         | .18021997+01           | .34507909+00           | .15068519+01           | .71608704+00    |
| .45204026+00         | .18025266+01           | .34432332+00           | .15195949+01           | .72389329+00    |
| .45378559+00         | .18028637+01           | .34364128+00           | .15325984+01           | .73176481+00    |
| .45553092+00         | .18032110+01           | .34302884+00           | .15458129+01           | .73970169+00    |
| .45727625+00         | .18035685+01           | .34248199+00           | .15592889+01           | .74770391+00    |
| .45902158+00         | .18039362+01           | .34199674+00           | .15729669+01           | .75577147+00    |
| .46076691+00         | .18043141+01           | .34157099+00           | .15868984+01           | .76390437+00    |
| .46251224+00         | .18047022+01           | .34120274+00           | .16011349+01           | .77210261+00    |
| .46425757+00         | .18051005+01           | .34089099+00           | .16156279+01           | .78036619+00    |
| .46600290+00         | .18055090+01           | .34063374+00           | .16303289+01           | .78869501+00    |
| .46774823+00         | .18059277+01           | .34043099+00           | .16452904+01           | .79708907+00    |
| .46949356+00         | .18063566+01           | .34028174+00           | .16604649+01           | .80554837+00    |
| .47123889+00         | .18067957+01           | .34018599+00           | .16758929+01           | .81407291+00    |
| .47298422+00         | .18072450+01           | .34014274+00           | .16915269+01           | .82266369+00    |
| .47472955+00         | .18077045+01           | .34015199+00           | .17073184+01           | .83132071+00    |
| .47647488+00         | .18081742+01           | .34021374+00           | .17233189+01           | .84004407+00    |
| .47822021+00         | .18086541+01           | .34032799+00           | .17395809+01           | .84883377+00    |
| .47996554+00         | .18091442+01           | .34049474+00           | .17561469+01           | .85768881+00    |
| .48171087+00         | .18096445+01           | .34071299+00           | .17729684+01           | .86660919+00    |
| .48345620+00         | .18101550+01           | .34098274+00           | .17900869+01           | .87559491+00    |
| .48520153+00         | .18106757+01           | .34130399+00           | .18074529+01           | .88464607+00    |
| .48694686+00         | .18112066+01           | .34167674+00           | .18250184+01           | .89376267+00    |
| .48869219+00         | .18117477+01           | .34210099+00           | .18427349+01           | .90294481+00    |
| .49043752+00         | .18122990+01           | .34257674+00           | .18606529+01           | .91219249+00    |
| .49218285+00         | .18128605+01           | .34310399+00           | .18788249+01           | .92150571+00    |
| .49392818+00         | .18134322+01           | .34368274+00           | .18972929+01           | .93088447+00    |
| .49567351+00         | .18140141+01           | .34431299+00           | .19160084+01           | .94032877+00    |
| .49741884+00         | .18146062+01           | .34499474+00           | .19349229+01           | .94983861+00    |
| .49916417+00         | .18152085+01           | .34572799+00           | .19540869+01           | .95941399+00    |
| .50090950+00         | .18158210+01           | .34651274+00           | .19734529+01           | .96905491+00    |
| .50265483+00         | .18164437+01           | .34734999+00           | .19930709+01           | .97876127+00    |
| .50439916+00         | .18170766+01           | .34823874+00           | .20128929+01           | .98853307+00    |
| .50614349+00         | .18177197+01           | .34917999+00           | .20329684+01           | .99837031+00    |
| .50788782+00         | .18183730+01           | .35017374+00           | .20532469+01           | .1.00827307+00  |
| .50963215+00         | .18190365+01           | .35122099+00           | .20737689+01           | .1.01824127+00  |
| .51137648+00         | .18197102+01           | .35232274+00           | .20944849+01           | .1.02827501+00  |
| .51312081+00         | .18203941+01           | .35347999+00           | .21154469+01           | .1.03837427+00  |
| .51486514+00         | .18210882+01           | .35469274+00           | .21366149+01           | .1.04853907+00  |
| .51660947+00         | .18217925+01           | .35596099+00           | .21579384+01           | .1.05876941+00  |
| .51835380+00         | .18225070+01           | .35728474+00           | .21794589+01           | .1.06906527+00  |
| .52009813+00         | .18232317+01           | .35866399+00           | .22012269+01           | .1.07942667+00  |
| .52184246+00         | .18239666+01           | .36009874+00           | .22231929+01           | .1.08985361+00  |
| .52358679+00         | .18247117+01           | .36159899+00           | .22454069+01           | .1.09934607+00  |
| .52533112+00         | .18254670+01           | .36316474+00           | .22678184+01           | .1.10890407+00  |
| .52707545+00         | .18262325+01           | .36479599+00           | .22904789+01           | .1.11852751+00  |
| .52881978+00         | .18270082+01           | .36649274+00           | .23133389+01           | .1.12821737+00  |
| .53056411+00         | .18277941+01           | .36825499+00           | .23364489+01           | .1.13797367+00  |
| .53230844+00         | .18285902+01           | .37008274+00           | .23597584+01           | .1.14779641+00  |
| .53405277+00         | .18293965+01           | .37197699+00           | .23833189+01           | .1.15768557+00  |
| .53579710+00         | .18302130+01           | .37393774+00           | .24070809+01           | .1.16764017+00  |
| .53754143+00         | .18310397+01           | .37596499+00           | .24310949+01           | .1.17766031+00  |
| .53928576+00         | .18318766+01           | .37805874+00           | .24553109+01           | .1.18774607+00  |
| .54103009+00         | .18327237+01           | .38021999+00           | .24796784+01           | .1.19789747+00  |
| .54277442+00         | .18335810+01           | .38244874+00           | .25042489+01           | .1.20811461+00  |
| .54451875+00         | .18344485+01           | .38474499+00           | .25290729+01           | .1.21839747+00  |
| .54626308+00         | .18353262+01           | .38710874+00           | .25540984+01           | .1.22874607+00  |
| .54800741+00         | .18362141+01           | .38954099+00           | .25793749+01           | .1.23916031+00  |
| .54975174+00         | .18371122+01           | .39204274+00           | .26048529+01           | .1.24964017+00  |
| .55149607+00         | .18380205+01           | .39461499+00           | .26305829+01           | .1.26018557+00  |
| .55324040+00         | .18389390+01           | .39725774+00           | .26565149+01           | .1.27079667+00  |
| .55498473+00         | .18398677+01           | .40007199+00           | .26826984+01           | .1.28147347+00  |
| .55672906+00         | .18408066+01           | .40295774+00           | .27090829+01           | .1.29221597+00  |
| .55847339+00         | .18417557+01           | .40591499+00           | .27357184+01           | .1.30302417+00  |
| .56021772+00         | .18427150+01           | .40894374+00           | .27625549+01           | .1.31389797+00  |
| .56196205+00         | .18436845+01           | .41204499+00           | .27896429+01           | .1.32483737+00  |
| .56370638+00         | .18446642+01           | .41521874+00           | .28169329+01           | .1.33584237+00  |
| .56545071+00         | .18456541+01           | .41846499+00           | .28444749+01           | .1.34691297+00  |
| .56719504+00         | .18466542+01           | .42178474+00           | .28722184+01           | .1.35804917+00  |
| .56893937+00         | .18476645+01           | .42517899+00           | .29002129+01           | .1.36925097+00  |
| .57068370+00         | .18486850+01           | .42864874+00           | .29284084+01           | .1.38051837+00  |
| .57242803+00         | .18497157+01           | .43219399+00           | .29568549+01           | .1.39185137+00  |
| .57417236+00         | .18507566+01           | .43581474+00           | .29855029+01           | .1.40325007+00  |
| .57591669+00         | .18518077+01           | .43951199+00           | .30143929+01           | .1.41471447+00  |
| .57766102+00         | .18528690+01           | .44328574+00           | .30434749+01           | .1.42624467+00  |
| .57940535+00         | .18539405+01           | .44713599+00           | .30728084+01           | .1.43784057+00  |
| .58114968+00         | .18550222+01           | .45106274+00           | .31023429+01           | .1.44950217+00  |
| .58289401+00         | .18561141+01           | .45506599+00           | .31321284+01           | .1.46122947+00  |
| .58463834+00         | .18572162+01           | .45914574+00           | .31621149+01           | .1.47302247+00  |
| .58638267+00         | .18583285+01           | .46330199+00           | .31923529+01           | .1.48488127+00  |
| .58812700+00         | .18594510+01           | .46753474+00           | .32228929+01           | .1.49680587+00  |
| .58987133+00         | .18605837+01           | .47184399+00           | .32536849+01           | .1.50879627+00  |
| .59161566+00         | .18617266+01           | .47622974+00           | .32847784+01           | .1.52085247+00  |
| .59336000+00         | .18628797+01           | .48069199+00           | .33161229+01           | .1.53297447+00  |
| .59510433+00         | .18640430+01           | .48523074+00           | .33477684+01           | .1.54516227+00  |
| .59684866+00         | .18652165+01           | .48984599+00           | .33796649+01           | .1.55741587+00  |
| .59859299+00         | .18664002+01           | .49453774+00           | .34118529+01           | .1.56973527+00  |
| .60033732+00         | .18675941+01           | .49930599+00           | .34442929+01           | .1.58212047+00  |
| .60208165+00         | .18687982+01           | .50415074+00           | .34770349+01           | .1.59457147+00  |
| .60382598+00         | .18699125+01           | .50907199+00           | .35100284+01           | .1.60708827+00  |
| .60557031+00         | .18710370+01           | .51407074+00           | .35433229+01           | .1.61967067+00  |
| .60731464+00         | .18721717+01           | .51914699+00           | .35768684+01           | .1.63231867+00  |
| .60905897+00         | .18733166+01           | .52429974+00           | .36106149+01           | .1.64503227+00  |
| .61080330+00         | .18744717+01           | .52952999+00           | .36446129+01           | .1.65781147+00  |
| .61254763+00         | .18756370+01           | .53483774+00           | .36788929+01           | .1.67065627+00  |
| .61429196+00         | .18768125+01           | .54022299+00           | .37134149+01           | .1.68356667+00  |
| .61603629+00         | .18779982+01           | .54568574+00           | .37481384+01           | .1.69654267+00  |
| .61778062+00         | .18791941+01           | .55122599+00           | .37831129+01           | .1.70958427+00  |
| .61952495+00         | .18804002+01           | .55684374+00           | .38182984+01           | .1.72269147+00  |
| .62126928+00         | .18816165+01           | .56253899+00           | .38536349+01           | .1.73586427+00  |
| .62301361+00         | .18828430+01           | .56831174+00           | .38891729+01           | .1.74909267+00  |
| .62475794+00         | .18840797+01           | .57416199+00           | .39249529+01           | .1.76238667+00  |
| .62650227+00         | .18853266+01           | .58008974+00           | .39609249+01           | .1.77574627+00  |
| .62824660+00         | .18865837+01           | .58609499+00           | .40071384+01           | .1.78917147+00  |
| .63000093+00         | .18878510+01           | .59217774+00           | .40536429+01           | .1.80266227+00  |
| .63174526+00         | .18891285+01           | .59833799+00           | .41003984+01           | .1.81621867+00  |
| .63348959+00         | .18904162+01           | .60457474+00           | .41474549+01           | .1.82984067+00  |
| .63523392+00         | .18917141+01           | .61088799+00           | .41947629+01           | .1.84352827+00  |
| .63697825+00         | .1893022               |                        |                        |                 |

TABLE 177. (Concluded)

| $M_{\infty} = .24999898+02$ |                     |                      | $\Theta_s = .39269907+00$ |                 |
|-----------------------------|---------------------|----------------------|---------------------------|-----------------|
| $\underline{\Theta}$        | $\underline{M_1^*}$ | $\underline{\psi_1}$ | $\underline{x}$           | $\underline{r}$ |
| .44724049+00                | .18016191+01        | .34232855+00         | .14910068+01              | .71517060+00    |
| .44811314+00                | .18017696+01        | .34154337+00         | .14977050+01              | .71999177+00    |
| .44898579+00                | .18019227+01        | .34075720+00         | .15045090+01              | .72487967+00    |
| .44985844+00                | .18020784+01        | .33996994+00         | .15114218+01              | .72983611+00    |
| .45073109+00                | .18022368+01        | .33918149+00         | .15184464+01              | .73486284+00    |
| .45160374+00                | .18023977+01        | .33839176+00         | .15255859+01              | .73996188+00    |
| .45204006+00                | .18024792+01        | .33799638+00         | .15291997+01              | .74253909+00    |
| .45247639+00                | .18025615+01        | .33760064+00         | .15328435+01              | .74513509+00    |
| .45291271+00                | .18026443+01        | .33720452+00         | .15365178+01              | .74775022+00    |
| .45334904+00                | .18027279+01        | .33680801+00         | .15402228+01              | .75038466+00    |
| .45378536+00                | .18028121+01        | .33641110+00         | .15439593+01              | .75303877+00    |
| .45422168+00                | .18028971+01        | .33601378+00         | .15477274+01              | .75571276+00    |
| .45465801+00                | .18029827+01        | .33561603+00         | .15515277+01              | .75840687+00    |
| .45509433+00                | .18030691+01        | .33521782+00         | .15553608+01              | .76112152+00    |
| .45553066+00                | .18031562+01        | .33481916+00         | .15592270+01              | .76385690+00    |
| .45596698+00                | .18032440+01        | .33442003+00         | .15631270+01              | .76661337+00    |
| .45640331+00                | .18033325+01        | .33402040+00         | .15670612+01              | .76939124+00    |
| .45683963+00                | .18034218+01        | .33362027+00         | .15710301+01              | .77219079+00    |
| .45727596+00                | .18035117+01        | .33321962+00         | .15750343+01              | .77501234+00    |
| .45771228+00                | .18036025+01        | .33281843+00         | .15790743+01              | .77785629+00    |
| .45809837+00                | .18036833+01        | .33246297+00         | .15826795+01              | .78039164+00    |

$$.41358962+01 = \Delta S/R$$

$$.16533298+03 = P_s/P_{\infty}$$

$$.40972150+01 = \rho_s/\rho_{\infty}$$

$$.40352527+02 = T_s/T_{\infty}$$

TABLE 178. CONICAL FLOWFIELD  $\theta_s = 22.5 \text{ DEG}$ ;  $M_\infty = 27.5$

| $\underline{u_s}$    | $\underline{M_\infty}$ | $\underline{\theta_s}$ | $\underline{\theta_w}$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .89894964+00         | .27499917+02           | .39269907+00           | .45776297+00           |                 |
| $\underline{\theta}$ | $\underline{M_1^*}$    | $\underline{\psi_1}$   | $\underline{x}$        | $\underline{r}$ |
| .39269907+00         | .17978656+01           | .39269907+00           | .12071068+01           | .50000000+00    |
| .39444440+00         | .17978710+01           | .39096098+00           | .12134813+01           | .50512350+00    |
| .39618973+00         | .17978873+01           | .38923691+00           | .12199811+01           | .51032913+00    |
| .39793506+00         | .17979140+01           | .38752619+00           | .12266102+01           | .51561940+00    |
| .39968038+00         | .17979510+01           | .38582818+00           | .12333725+01           | .52079691+00    |
| .40142571+00         | .17979982+01           | .38414224+00           | .12402724+01           | .52646435+00    |
| .40317104+00         | .17980555+01           | .38246777+00           | .12473143+01           | .53202458+00    |
| .40491637+00         | .17981225+01           | .38080417+00           | .12545028+01           | .53768056+00    |
| .40666170+00         | .17981993+01           | .37915086+00           | .12618430+01           | .54343542+00    |
| .40840703+00         | .17982857+01           | .37750726+00           | .12693399+01           | .54929241+00    |
| .41015235+00         | .17983815+01           | .37587282+00           | .12769991+01           | .55525497+00    |
| .41189768+00         | .17984867+01           | .37424698+00           | .12848261+01           | .56132666+00    |
| .41364301+00         | .17986013+01           | .37262920+00           | .12928270+01           | .56751132+00    |
| .41538834+00         | .17987250+01           | .37101893+00           | .13010080+01           | .57381286+00    |
| .41713367+00         | .17988579+01           | .36941566+00           | .13093761+01           | .58023556+00    |
| .41887899+00         | .17990000+01           | .36781884+00           | .13179379+01           | .58678373+00    |
| .42018799+00         | .17991124+01           | .36662515+00           | .13244911+01           | .59178004+00    |
| .42149699+00         | .17992300+01           | .36543457+00           | .13311608+01           | .59685161+00    |
| .42280598+00         | .17993526+01           | .36424688+00           | .13379505+01           | .60200000+00    |
| .42411498+00         | .17994803+01           | .36306186+00           | .13448639+01           | .60722927+00    |
| .42542398+00         | .17996131+01           | .36187928+00           | .13519045+01           | .61253992+00    |
| .42673297+00         | .17997509+01           | .36069892+00           | .13590764+01           | .61793498+00    |
| .42804197+00         | .17998939+01           | .35952055+00           | .13663837+01           | .62341703+00    |
| .42935096+00         | .18000419+01           | .35834395+00           | .13738307+01           | .62898874+00    |
| .43065996+00         | .18001950+01           | .35716888+00           | .13814218+01           | .63465284+00    |
| .43196896+00         | .18003532+01           | .35599512+00           | .13891615+01           | .64041218+00    |
| .43327795+00         | .18005166+01           | .35482242+00           | .13970551+01           | .64626987+00    |
| .43458695+00         | .18006851+01           | .35365054+00           | .14051075+01           | .65222914+00    |
| .43589595+00         | .18008589+01           | .35247926+00           | .14133244+01           | .65829330+00    |
| .43720494+00         | .18010378+01           | .35130830+00           | .14217112+01           | .66446583+00    |
| .43851394+00         | .18012221+01           | .35013743+00           | .14302742+01           | .67075050+00    |
| .43982294+00         | .18014119+01           | .34935677+00           | .14360838+01           | .67500445+00    |
| .44113193+00         | .18016066+01           | .34857595+00           | .14419763+01           | .67931113+00    |
| .44244093+00         | .18018066+01           | .34779489+00           | .14479539+01           | .68367182+00    |
| .44374993+00         | .18020119+01           | .34701354+00           | .14540186+01           | .68808772+00    |
| .44505893+00         | .18022234+01           | .34623180+00           | .14601726+01           | .69256021+00    |
| .44636793+00         | .18024411+01           | .34544958+00           | .14664181+01           | .69709063+00    |
| .44767693+00         | .18026650+01           | .34466679+00           | .14727576+01           | .70168053+00    |
| .44898593+00         | .18028951+01           | .34388335+00           | .14791934+01           | .70633128+00    |
| .45029493+00         | .18031314+01           | .34309917+00           | .14857281+01           | .71104450+00    |



TABLE 178. (Concluded)

$$M_{\infty} = .27499917+02$$

$$\Theta_s = .39269907+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .44724048+00 | .18025914+01 | .34231415+00 | .14923643+01 | .71582174+00 |
| .44811313+00 | .18027422+01 | .34152820+00 | .14991048+01 | .72066468+00 |
| .44898573+00 | .18028955+01 | .34074124+00 | .15059523+01 | .72557503+00 |
| .44985843+00 | .18030515+01 | .33995315+00 | .15129098+01 | .73055460+00 |
| .45073108+00 | .18032102+01 | .33916384+00 | .15199804+01 | .73560522+00 |
| .45160373+00 | .18033714+01 | .33837321+00 | .15271672+01 | .74072884+00 |
| .45204005+00 | .18034531+01 | .33797736+00 | .15308053+01 | .74331870+00 |
| .45247638+00 | .18035355+01 | .33758115+00 | .15344738+01 | .74592759+00 |
| .45291270+00 | .18036185+01 | .33718455+00 | .15381731+01 | .74855576+00 |
| .45334903+00 | .18037022+01 | .33678755+00 | .15419035+01 | .75120347+00 |
| .45378535+00 | .18037866+01 | .33639014+00 | .15456657+01 | .75387102+00 |
| .45422168+00 | .18038718+01 | .33599231+00 | .15494599+01 | .75655869+00 |
| .45465800+00 | .18039576+01 | .33559403+00 | .15532869+01 | .75926676+00 |
| .45509433+00 | .18040441+01 | .33519530+00 | .15571469+01 | .76199555+00 |
| .45553065+00 | .18041314+01 | .33479609+00 | .15610407+01 | .76474538+00 |
| .45596698+00 | .18042194+01 | .33439641+00 | .15649685+01 | .76751649+00 |
| .45640330+00 | .18043081+01 | .33399622+00 | .15689310+01 | .77030926+00 |
| .45683962+00 | .18043975+01 | .33359551+00 | .15729287+01 | .77312398+00 |
| .45727595+00 | .18044877+01 | .33319427+00 | .15769621+01 | .77596094+00 |
| .45771227+00 | .18045786+01 | .33279248+00 | .15810318+01 | .77882053+00 |
| .45776297+00 | .18045892+01 | .33274575+00 | .15815070+01 | .77915424+00 |

$$.44098512+01 = \Delta S/R$$

$$.19977175+03 = P_s/P_{\infty}$$

$$.41133932+01 = \rho_s/\rho_{\infty}$$

$$.48566170+02 = T_s/T_{\infty}$$

TABLE 179. CONICAL FLOWFIELD  $\theta_s = 22.5 \text{ DEG}$ ;  $M_\infty = 30.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .89931788+00 | .29999877+02 | .39269907+00 | .45750773+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .39269907+00 | .17986020+01 | .39269907+00 | .12071068+01 | .50000000+00 |
| .39444440+00 | .17986075+01 | .39096098+00 | .12134983+01 | .50513056+00 |
| .39618973+00 | .17986237+01 | .38923690+00 | .12200157+01 | .51034359+00 |
| .39793506+00 | .17986504+01 | .38752618+00 | .12266630+01 | .51564161+00 |
| .39968038+00 | .17986875+01 | .38582815+00 | .12334442+01 | .52102721+00 |
| .40142571+00 | .17987348+01 | .38414220+00 | .12403637+01 | .52650311+00 |
| .40317104+00 | .17987920+01 | .38246769+00 | .12474258+01 | .53207218+00 |
| .40491637+00 | .17988592+01 | .38080405+00 | .12546355+01 | .53773741+00 |
| .40666170+00 | .17989360+01 | .37915067+00 | .12619975+01 | .54350196+00 |
| .40840703+00 | .17990224+01 | .37750700+00 | .12695172+01 | .54936910+00 |
| .41015235+00 | .17991183+01 | .37587246+00 | .12771999+01 | .55534227+00 |
| .41189768+00 | .17992236+01 | .37424651+00 | .12850514+01 | .56142510+00 |
| .41364301+00 | .17993381+01 | .37262859+00 | .12930777+01 | .56762140+00 |
| .41538834+00 | .17994620+01 | .37101816+00 | .13012853+01 | .57393517+00 |
| .41713367+00 | .17995949+01 | .36941470+00 | .13096810+01 | .58037067+00 |
| .41887899+00 | .17997371+01 | .36781766+00 | .13182717+01 | .58693233+00 |
| .42018799+00 | .17998496+01 | .36662379+00 | .13248472+01 | .59193913+00 |
| .42149699+00 | .17999672+01 | .36543300+00 | .13315400+01 | .59702164+00 |
| .42280598+00 | .18000899+01 | .36424509+00 | .13383535+01 | .60218193+00 |
| .42411498+00 | .18002177+01 | .36305983+00 | .13452915+01 | .60742233+00 |
| .42542398+00 | .18003506+01 | .36187699+00 | .13523576+01 | .61274520+00 |
| .42673297+00 | .18004885+01 | .36069634+00 | .13595557+01 | .61815289+00 |
| .42804197+00 | .18006316+01 | .35951767+00 | .13668900+01 | .62364804+00 |
| .42935096+00 | .18007797+01 | .35834073+00 | .13743651+01 | .62923340+00 |
| .43065996+00 | .18009329+01 | .35716530+00 | .13819851+01 | .63491166+00 |
| .43196896+00 | .18010913+01 | .35599115+00 | .13897551+01 | .64068580+00 |
| .43327795+00 | .18012548+01 | .35481803+00 | .13976797+01 | .64655884+00 |
| .43458695+00 | .18014234+01 | .35364571+00 | .14057646+01 | .65253413+00 |
| .43589595+00 | .18015973+01 | .35247394+00 | .14140149+01 | .65861493+00 |
| .43720494+00 | .18017765+01 | .35130247+00 | .14224366+01 | .66480483+00 |
| .43851394+00 | .18019609+01 | .35013105+00 | .14310356+01 | .67110755+00 |
| .43982294+00 | .18020866+01 | .34935000+00 | .14368700+01 | .67537402+00 |
| .44025927+00 | .18022151+01 | .34856878+00 | .14427880+01 | .67969353+00 |
| .44113193+00 | .18023458+01 | .34778730+00 | .14487918+01 | .68406743+00 |
| .44200458+00 | .18024793+01 | .34700552+00 | .14548832+01 | .68849688+00 |
| .44287723+00 | .18026152+01 | .34622332+00 | .14610648+01 | .69298337+00 |
| .44374988+00 | .18027535+01 | .34544062+00 | .14673387+01 | .69752825+00 |
| .44462253+00 | .18028943+01 | .34465734+00 | .14737073+01 | .70213298+00 |
| .44549518+00 | .18030377+01 | .34387337+00 | .14801731+01 | .70679907+00 |
| .44636783+00 | .18031835+01 | .34308865+00 | .14867385+01 | .71152804+00 |

TABLE 179. (Concluded)

| $M_{\infty} = .29999877+02$ |              |              | $\Theta_s = .39269907+00$ |              |
|-----------------------------|--------------|--------------|---------------------------|--------------|
| $\Theta$                    | $M_1^*$      | $\psi_1$     | $x$                       | $r$          |
| .44724048+00                | .18033319+01 | .34230306+00 | .14934063+01              | .71632151+00 |
| .44811312+00                | .18034828+01 | .34151653+00 | .15001792+01              | .72118117+00 |
| .44898577+00                | .18036364+01 | .34072895+00 | .15070602+01              | .72610880+00 |
| .44985842+00                | .18037926+01 | .33994022+00 | .15140521+01              | .73110618+00 |
| .45073107+00                | .18039514+01 | .33915025+00 | .15211582+01              | .73617522+00 |
| .45160372+00                | .18041130+01 | .33835893+00 | .15283816+01              | .74131788+00 |
| .45204005+00                | .18041947+01 | .33796273+00 | .15320384+01              | .74391744+00 |
| .45247637+00                | .18042772+01 | .33756615+00 | .15357258+01              | .74653618+00 |
| .45291270+00                | .18043604+01 | .33716918+00 | .15394443+01              | .74917440+00 |
| .45334902+00                | .18044442+01 | .33677180+00 | .15431943+01              | .75183232+00 |
| .45378534+00                | .18045288+01 | .33637401+00 | .15469762+01              | .75451022+00 |
| .45422167+00                | .18046141+01 | .33597578+00 | .15507907+01              | .75720846+00 |
| .45465799+00                | .18047000+01 | .33557710+00 | .15546382+01              | .75992728+00 |
| .45509432+00                | .18047867+01 | .33517796+00 | .15585191+01              | .76266701+00 |
| .45553064+00                | .18048741+01 | .33477834+00 | .15624339+01              | .76542789+00 |
| .45596697+00                | .18049622+01 | .33437822+00 | .15663831+01              | .76821026+00 |
| .45640329+00                | .18050511+01 | .33397760+00 | .15703674+01              | .77101446+00 |
| .45683962+00                | .18051406+01 | .33357644+00 | .15743873+01              | .77384084+00 |
| .45727594+00                | .18052310+01 | .33317475+00 | .15784432+01              | .77668970+00 |
| .45750773+00                | .18052793+01 | .33296113+00 | .15806127+01              | .77821234+00 |

$$.46617202+01 = \Delta S/R$$

$$.23748982+03 = P_s/P_{\infty}$$

$$.41258217+01 = \rho_s/\rho_{\infty}$$

$$.57561825+02 = T_s/T_{\infty}$$

TABLE 180. CONICAL FLOWFIELD  $\theta_s = 25.0$  DEG;  $M_\infty = 1.5742015$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .50000938+00 | .15742015+01 | .43633230+00 | .94030194+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .43633230+00 | .10000000+01 | .43633230+00 | .10722535+01 | .50000000+00 |
| .45204026+00 | .10002338+01 | .42113384+00 | .10647379+01 | .51700893+00 |
| .46774821+00 | .10008876+01 | .40688155+00 | .10578648+01 | .53436594+00 |
| .48345616+00 | .10019010+01 | .39347757+00 | .10515902+01 | .55209714+00 |
| .49916412+00 | .10032251+01 | .38083699+00 | .10458789+01 | .57023163+00 |
| .51487195+00 | .10048195+01 | .36888560+00 | .10407037+01 | .58880157+00 |
| .52927078+00 | .10064905+01 | .35847992+00 | .10364127+01 | .60623700+00 |
| .54366962+00 | .10083403+01 | .34855411+00 | .10325425+01 | .62409843+00 |
| .55806845+00 | .10103512+01 | .33906829+00 | .10290853+01 | .64241885+00 |
| .57246729+00 | .10125089+01 | .32998639+00 | .10260365+01 | .66123438+00 |
| .58686613+00 | .10148011+01 | .32127599+00 | .10233951+01 | .68058466+00 |
| .59995598+00 | .10169933+01 | .31365488+00 | .10213492+01 | .69867655+00 |
| .61304583+00 | .10192823+01 | .30629597+00 | .10196460+01 | .71728245+00 |
| .62613568+00 | .10216632+01 | .29918052+00 | .10182922+01 | .73644182+00 |
| .63922553+00 | .10241317+01 | .29229120+00 | .10172967+01 | .75619803+00 |
| .65231538+00 | .10266848+01 | .28561182+00 | .10166713+01 | .77659893+00 |
| .66409624+00 | .10290530+01 | .27976733+00 | .10164373+01 | .79555475+00 |
| .67587711+00 | .10314867+01 | .27407036+00 | .10165276+01 | .81511789+00 |
| .68765797+00 | .10339853+01 | .26851108+00 | .10169581+01 | .83533577+00 |
| .69943884+00 | .10365486+01 | .26308011+00 | .10177466+01 | .85626025+00 |
| .71121971+00 | .10391769+01 | .25776860+00 | .10189138+01 | .87794880+00 |
| .72169159+00 | .10415684+01 | .25314060+00 | .10202891+01 | .89792090+00 |
| .73216347+00 | .10440128+01 | .24859440+00 | .10220025+01 | .91859749+00 |
| .74263535+00 | .10465113+01 | .24412426+00 | .10240762+01 | .94003404+00 |
| .75310723+00 | .10490654+01 | .23972472+00 | .10265357+01 | .96229227+00 |
| .76357911+00 | .10516769+01 | .23539026+00 | .10294103+01 | .98544117+00 |
| .77274200+00 | .10540110+01 | .23164664+00 | .10322920+01 | .10064875+01 |
| .78190490+00 | .10563925+01 | .22794500+00 | .10355423+01 | .10283326+01 |
| .79106779+00 | .10588237+01 | .22428163+00 | .10391898+01 | .10510407+01 |
| .80023069+00 | .10613067+01 | .22065280+00 | .10432671+01 | .10746839+01 |
| .80939358+00 | .10638443+01 | .21705471+00 | .10478112+01 | .10993430+01 |
| .81724750+00 | .10660651+01 | .21399207+00 | .10521098+01 | .11213566+01 |
| .82510141+00 | .10683305+01 | .21094655+00 | .10568127+01 | .11442478+01 |
| .83295532+00 | .10706429+01 | .20791549+00 | .10619543+01 | .11680888+01 |
| .84080923+00 | .10730049+01 | .20489608+00 | .10675733+01 | .11929402+01 |
| .84866314+00 | .10754197+01 | .20188534+00 | .10737140+01 | .12189533+01 |
| .85520804+00 | .10774749+01 | .19938074+00 | .10792659+01 | .12415452+01 |
| .86175299+00 | .10795713+01 | .19687801+00 | .10852485+01 | .12650551+01 |
| .86829791+00 | .10817116+01 | .19437509+00 | .10916991+01 | .12895582+01 |
| .87484284+00 | .10838985+01 | .19186972+00 | .10986602+01 | .13151393+01 |

TABLE 180. (Concluded)

$$M_{\infty} = .15742015+01$$

$$\Theta_s = .43633230+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .88138776+00 | .10861350+01 | .18935946+00 | .11061803+01 | .13418944+01 |
| .88662370+00 | .10879625+01 | .18734595+00 | .11126356+01 | .13642162+01 |
| .89185964+00 | .10898260+01 | .18532613+00 | .11195162+01 | .13874214+01 |
| .89709558+00 | .10917277+01 | .18329838+00 | .11268580+01 | .14115800+01 |
| .90233152+00 | .10936703+01 | .18126096+00 | .11347017+01 | .14367707+01 |
| .90756746+00 | .10956564+01 | .17921193+00 | .11430936+01 | .14630818+01 |
| .91149423+00 | .10971764+01 | .17766630+00 | .11497783+01 | .14836094+01 |
| .91542031+00 | .10987241+01 | .17611209+00 | .11568244+01 | .15048667+01 |
| .91934639+00 | .11003010+01 | .17454610+00 | .11642608+01 | .15269098+01 |
| .92327248+00 | .11019086+01 | .17297314+00 | .11721183+01 | .15497966+01 |
| .92719856+00 | .11035496+01 | .17138594+00 | .11804316+01 | .15735919+01 |
| .92981595+00 | .11046627+01 | .17032033+00 | .11862460+01 | .15899955+01 |
| .93243334+00 | .11057921+01 | .16924819+00 | .11922927+01 | .16068582+01 |
| .93505073+00 | .11069386+01 | .16816905+00 | .11985857+01 | .16242059+01 |
| .93766811+00 | .11081028+01 | .16708238+00 | .12051400+01 | .16420660+01 |
| .94028550+00 | .11092856+01 | .16598761+00 | .12119720+01 | .16604690+01 |
| .94030194+00 | .11092931+01 | .16598071+00 | .12120158+01 | .16605863+01 |

$$.14713511+01 = \Delta S/R$$

$$.21629060+01 = P_s/P_{\infty}$$

$$.15792922+01 = \rho_s/\rho_{\infty}$$

$$.13695414+01 = T_s/T_{\infty}$$



TABLE 181. CONICAL FLOWFIELD  $\theta_s = 25.0$  DEG;  $M_\infty = 2.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .60113038+00 | .19999953+01 | .43633230+00 | .76841363+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .43633230+00 | .12022382+01 | .43633230+00 | .10722535+01 | .50000000+00 |
| .44636794+00 | .12023553+01 | .42650656+00 | .10763486+01 | .51512249+00 |
| .45640358+00 | .12026907+01 | .41707762+00 | .10807070+01 | .53060281+00 |
| .46643921+00 | .12032239+01 | .40801374+00 | .10853431+01 | .54646415+00 |
| .47647485+00 | .12039371+01 | .39928636+00 | .10902725+01 | .56273154+00 |
| .48651049+00 | .12048151+01 | .39086968+00 | .10955125+01 | .57943210+00 |
| .49656734+00 | .12057497+01 | .38343632+00 | .11005842+01 | .59308358+00 |
| .50483640+00 | .12068021+01 | .37622605+00 | .11059462+01 | .61114470+00 |
| .51399929+00 | .12079650+01 | .36922374+00 | .11116157+01 | .62764166+00 |
| .52316219+00 | .12092319+01 | .36241545+00 | .11176116+01 | .64460294+00 |
| .53232508+00 | .12105971+01 | .35578815+00 | .11239544+01 | .66205922+00 |
| .54061532+00 | .12119131+01 | .34993782+00 | .11300110+01 | .67830755+00 |
| .54890556+00 | .12133026+01 | .34421717+00 | .11363885+01 | .69501564+00 |
| .55719580+00 | .12147630+01 | .33861813+00 | .11431070+01 | .71221274+00 |
| .56548604+00 | .12162923+01 | .33313310+00 | .11501886+01 | .72993081+00 |
| .57377627+00 | .12178886+01 | .32775480+00 | .11576574+01 | .74820466+00 |
| .58119386+00 | .12193726+01 | .32302733+00 | .11646902+01 | .76505715+00 |
| .58861144+00 | .12209083+01 | .31837479+00 | .11720755+01 | .78241479+00 |
| .59602902+00 | .12224954+01 | .31379257+00 | .11798361+01 | .80030999+00 |
| .60344660+00 | .12241334+01 | .30927603+00 | .11879976+01 | .81877806+00 |
| .61086418+00 | .12258224+01 | .30482069+00 | .11965877+01 | .83785779+00 |
| .61740911+00 | .12273550+01 | .30093686+00 | .12045475+01 | .85523453+00 |
| .62395404+00 | .12289278+01 | .29709424+00 | .12128881+01 | .87315229+00 |
| .63049896+00 | .12305409+01 | .29328989+00 | .12216348+01 | .89164587+00 |
| .63704389+00 | .12321951+01 | .28952082+00 | .12308159+01 | .91075342+00 |
| .64358881+00 | .12338910+01 | .28578407+00 | .12404622+01 | .93051662+00 |
| .64926108+00 | .12353953+01 | .28256936+00 | .12492246+01 | .94821034+00 |
| .65493335+00 | .12369322+01 | .27937465+00 | .12583866+01 | .96646372+00 |
| .66060562+00 | .12385027+01 | .27619794+00 | .12679746+01 | .98531231+00 |
| .66627789+00 | .12401075+01 | .27303712+00 | .12780182+01 | .10047953+01 |
| .67195015+00 | .12417479+01 | .26989009+00 | .12885499+01 | .10249554+01 |
| .67767497+00 | .12431645+01 | .26723634+00 | .12978689+01 | .10425778+01 |
| .68154938+00 | .12446082+01 | .26458954+00 | .13075866+01 | .10607498+01 |
| .68634899+00 | .12460799+01 | .26194823+00 | .13177296+01 | .10795058+01 |
| .69114860+00 | .12475806+01 | .25931092+00 | .13283261+01 | .10988829+01 |
| .69594821+00 | .12491113+01 | .25667604+00 | .13394078+01 | .11189220+01 |
| .69987517+00 | .12503870+01 | .25452088+00 | .13488597+01 | .11358410+01 |
| .70380212+00 | .12516844+01 | .25236534+00 | .13586804+01 | .11532599+01 |
| .70772908+00 | .12530042+01 | .25020836+00 | .13688926+01 | .11712077+01 |
| .71165603+00 | .12543475+01 | .24804895+00 | .13795211+01 | .11897159+01 |

TABLE 181. (Concluded)

$$M_{\infty} = .19999953+01$$

$$\Theta_s = .43633230+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .71558299+00 | .12557150+01 | .24588597+00 | .13905929+01 | .12088190+01 |
| .71863729+00 | .12567962+01 | .24420047+00 | .13995296+01 | .12241123+01 |
| .72169159+00 | .12578932+01 | .24251151+00 | .14087677+01 | .12398074+01 |
| .72474588+00 | .12590066+01 | .24081851+00 | .14183233+01 | .12559248+01 |
| .72779960+00 | .12601378+01 | .23912098+00 | .14282123+01 | .12724838+01 |
| .73085322+00 | .12612868+01 | .23741811+00 | .14384553+01 | .12895108+01 |
| .73303438+00 | .12621188+01 | .23619807+00 | .14460002+01 | .13019742+01 |
| .73521554+00 | .12629604+01 | .23497464+00 | .14537445+01 | .13146999+01 |
| .73739669+00 | .12638120+01 | .23374753+00 | .14616969+01 | .13276989+01 |
| .73957785+00 | .12646738+01 | .23251642+00 | .14698665+01 | .13409823+01 |
| .74175901+00 | .12655463+01 | .23128099+00 | .14782631+01 | .13545624+01 |
| .74306770+00 | .12660750+01 | .23053750+00 | .14834144+01 | .13628583+01 |
| .74437640+00 | .12666077+01 | .22979227+00 | .14886535+01 | .13712685+01 |
| .74568509+00 | .12671446+01 | .22904522+00 | .14939829+01 | .13797963+01 |
| .74699379+00 | .12676856+01 | .22829624+00 | .14994053+01 | .13884446+01 |
| .74830248+00 | .12682309+01 | .22754528+00 | .15049232+01 | .13972169+01 |
| .74961118+00 | .12687805+01 | .22679222+00 | .15105396+01 | .14061166+01 |
| .75091987+00 | .12693346+01 | .22603700+00 | .15162572+01 | .14151473+01 |
| .75222857+00 | .12698932+01 | .22527951+00 | .15220790+01 | .14243125+01 |
| .75353726+00 | .12704566+01 | .22451966+00 | .15280084+01 | .14336164+01 |
| .75484595+00 | .12710246+01 | .22375733+00 | .15340487+01 | .14430630+01 |
| .75615465+00 | .12715976+01 | .22299243+00 | .15402032+01 | .14526565+01 |
| .75746334+00 | .12721756+01 | .22222488+00 | .15464756+01 | .14624013+01 |
| .75877204+00 | .12727586+01 | .22145452+00 | .15528698+01 | .14723021+01 |
| .76008073+00 | .12733470+01 | .22068125+00 | .15593896+01 | .14823638+01 |
| .76138943+00 | .12739406+01 | .21990496+00 | .15660395+01 | .14925915+01 |
| .76269812+00 | .12745398+01 | .21912551+00 | .15728235+01 | .15029904+01 |
| .76400682+00 | .12751447+01 | .21834277+00 | .15797466+01 | .15135663+01 |
| .76531551+00 | .12757553+01 | .21755661+00 | .15868133+01 | .15243250+01 |
| .76662420+00 | .12763719+01 | .21676689+00 | .15940290+01 | .15352727+01 |
| .76793290+00 | .12769947+01 | .21597344+00 | .16013989+01 | .15464159+01 |
| .76841363+00 | .12772250+01 | .21568102+00 | .16041459+01 | .15505596+01 |

$$.35871476-01 = \Delta S/R$$

$$.26153053+01 = P_s/P_{\infty}$$

$$.17549984+01 = \rho_s/\rho_{\infty}$$

$$.14902038+01 = T_s/T_{\infty}$$

TABLE 182. CONICAL FLOWFIELD  $\theta_s = 25.0 \text{ DEG}$ ;  $M_\infty = 2.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .67605608+00 | .24997805+01 | .43633230+00 | .67675234+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .43633230+00 | .13520868+01 | .43633230+00 | .10722535+01 | .50000000+00 |
| .44331361+00 | .13521512+01 | .42945307+00 | .10781250+01 | .51193136+00 |
| .45029493+00 | .13523383+01 | .42276875+00 | .10842391+01 | .52414164+00 |
| .45727324+00 | .13526397+01 | .41626626+00 | .10906081+01 | .53664566+00 |
| .46425755+00 | .13530485+01 | .40993359+00 | .10972451+01 | .54945937+00 |
| .47080253+00 | .13535233+01 | .40414105+00 | .11037233+01 | .56176856+00 |
| .47734752+00 | .13540820+01 | .39847950+00 | .11104624+01 | .57438007+00 |
| .48389250+00 | .13547205+01 | .39294096+00 | .11174760+01 | .58731006+00 |
| .49043748+00 | .13554351+01 | .38751797+00 | .11247790+01 | .60057599+00 |
| .49654613+00 | .13561679+01 | .38255453+00 | .11318705+01 | .61327716+00 |
| .50265475+00 | .13569618+01 | .37768014+00 | .11392424+01 | .62630370+00 |
| .50876335+00 | .13578147+01 | .37288961+00 | .11469099+01 | .63967323+00 |
| .51487195+00 | .13587250+01 | .36817802+00 | .11548897+01 | .65340485+00 |
| .52054422+00 | .13596202+01 | .36386952+00 | .11625948+01 | .66649775+00 |
| .52621648+00 | .13605624+01 | .35962131+00 | .11706002+01 | .67993826+00 |
| .53188875+00 | .13615507+01 | .35542988+00 | .11789230+01 | .69374546+00 |
| .53756102+00 | .13625844+01 | .35129172+00 | .11875814+01 | .70793995+00 |
| .54279696+00 | .13635783+01 | .34751626+00 | .11958887+01 | .72140548+00 |
| .54803290+00 | .13646100+01 | .34378076+00 | .12045160+01 | .73523890+00 |
| .55326884+00 | .13656794+01 | .34008262+00 | .12134815+01 | .74946056+00 |
| .55850478+00 | .13667862+01 | .33641928+00 | .12228052+01 | .76409251+00 |
| .56330439+00 | .13678338+01 | .33308969+00 | .12316851+01 | .77788594+00 |
| .56810401+00 | .13689129+01 | .32978532+00 | .12409024+01 | .79206406+00 |
| .57290362+00 | .13700238+01 | .32650422+00 | .12504766+01 | .80664837+00 |
| .57770323+00 | .13711648+01 | .32324445+00 | .12604292+01 | .82166211+00 |
| .58206651+00 | .13722339+01 | .32029787+00 | .12698249+01 | .83570481+00 |
| .58642980+00 | .13733281+01 | .31736580+00 | .12795715+01 | .85014372+00 |
| .59079308+00 | .13744497+01 | .31444672+00 | .12896895+01 | .86500105+00 |
| .59515636+00 | .13755994+01 | .31153907+00 | .13002014+01 | .88030077+00 |
| .59908332+00 | .13766584+01 | .30893064+00 | .13100188+01 | .89447026+00 |
| .60301027+00 | .13777411+01 | .30632899+00 | .13201942+01 | .90903972+00 |
| .60693723+00 | .13788478+01 | .30373294+00 | .13307485+01 | .92403143+00 |
| .61086418+00 | .13799792+01 | .30114114+00 | .13417043+01 | .93946933+00 |
| .61435481+00 | .13810062+01 | .29883985+00 | .13517998+01 | .95358768+00 |
| .61784544+00 | .13820536+01 | .29653994+00 | .13622510+01 | .96809912+00 |
| .62133607+00 | .13831220+01 | .29424037+00 | .13730783+01 | .98302509+00 |
| .62482669+00 | .13842122+01 | .29194020+00 | .13843036+01 | .99838874+00 |
| .62788099+00 | .13851844+01 | .28992610+00 | .13944713+01 | .10122108+01 |
| .63093529+00 | .13861743+01 | .28790992+00 | .14049797+01 | .10264054+01 |
| .63398959+00 | .13871823+01 | .28589076+00 | .14158478+01 | .10409923+01 |

TABLE 182. (Concluded)

$$M_{\infty} = .24999805+01$$

$$\Theta_s = .43633230+00$$

| $\underline{\Theta}$ | $\underline{M_1^*}$ | $\underline{\psi_1}$ | $\underline{x}$ | $\underline{r}$ |
|----------------------|---------------------|----------------------|-----------------|-----------------|
| .63704350+00         | .13882097+01        | .28386781+00         | .14270945+01    | .10559907+01    |
| .63966089+00         | .13891061+01        | .28213011+00         | .14370527+01    | .10691914+01    |
| .64227828+00         | .13900171+01        | .28038837+00         | .14473214+01    | .10827282+01    |
| .64489567+00         | .13909433+01        | .27864201+00         | .14579168+01    | .10966177+01    |
| .64751305+00         | .13918851+01        | .27689046+00         | .14688562+01    | .11108777+01    |
| .64969421+00         | .13926822+01        | .27542634+00         | .14782488+01    | .11230581+01    |
| .65187537+00         | .13934909+01        | .27395764+00         | .14879052+01    | .11355213+01    |
| .65405653+00         | .13943115+01        | .27248394+00         | .14978378+01    | .11482800+01    |
| .65623768+00         | .13951444+01        | .27100469+00         | .15080600+01    | .11613478+01    |
| .65798261+00         | .13958199+01        | .26981701+00         | .15164560+01    | .11720346+01    |
| .65972754+00         | .13965037+01        | .26862522+00         | .15250544+01    | .11829365+01    |
| .66147246+00         | .13971961+01        | .26742908+00         | .15338635+01    | .11940621+01    |
| .66321739+00         | .13978974+01        | .26622825+00         | .15428922+01    | .12054203+01    |
| .66452608+00         | .13984293+01        | .26532438+00         | .15498135+01    | .12140973+01    |
| .66583478+00         | .13989664+01        | .26441756+00         | .15568677+01    | .12229147+01    |
| .66714347+00         | .13995089+01        | .26350770+00         | .15640592+01    | .12318768+01    |
| .66845217+00         | .14000569+01        | .26259460+00         | .15713927+01    | .12409883+01    |
| .66976086+00         | .14006105+01        | .26167813+00         | .15788729+01    | .12502542+01    |
| .67106955+00         | .14011699+01        | .26075811+00         | .15865048+01    | .12596793+01    |
| .67237825+00         | .14017351+01        | .25983441+00         | .15942940+01    | .12692692+01    |
| .67368694+00         | .14023065+01        | .25890683+00         | .16022459+01    | .12790295+01    |
| .67499564+00         | .14028840+01        | .25797521+00         | .16103664+01    | .12889659+01    |
| .67630433+00         | .14034680+01        | .25703932+00         | .16186618+01    | .12990848+01    |
| .67675234+00         | .14036693+01        | .25671795+00         | .16215428+01    | .13025918+01    |

$$.84324256-01 = \Delta S/R$$

$$.33329899+01 = P_s/P_{\infty}$$

$$.19908799+01 = \rho_s/\rho_{\infty}$$

$$.16741291+01 = T_s/T_{\infty}$$

/ TABLE 183. CONICAL FLOWFIELD  $\theta_s = 25.0$  DEG;  $M_\infty = 3.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .72556309+00 | .29999890+01 | .43633230+00 | .62701923+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .43633230+00 | .14510990+01 | .43633230+00 | .10722535+01 | .50000000+00 |
| .44156829+00 | .14511381+01 | .43115392+00 | .10783122+01 | .50971583+00 |
| .44680427+00 | .14512526+01 | .42608622+00 | .10845728+01 | .51964021+00 |
| .45204026+00 | .14514387+01 | .42112270+00 | .10910444+01 | .52978267+00 |
| .45727624+00 | .14516929+01 | .41625730+00 | .10977366+01 | .54015335+00 |
| .46251222+00 | .14520120+01 | .41148435+00 | .11046599+01 | .55076308+00 |
| .46774821+00 | .14523935+01 | .40679848+00 | .11118254+01 | .56162336+00 |
| .47298419+00 | .14528347+01 | .40219466+00 | .11192449+01 | .57274651+00 |
| .47822018+00 | .14533334+01 | .39766808+00 | .11269314+01 | .58414572+00 |
| .48345616+00 | .14538876+01 | .39321420+00 | .11348988+01 | .59583510+00 |
| .48869215+00 | .14544957+01 | .38882866+00 | .11431618+01 | .60782987+00 |
| .49305547+00 | .14550424+01 | .38522323+00 | .11502853+01 | .61807054+00 |
| .49741879+00 | .14556246+01 | .38166004+00 | .11576355+01 | .62854469+00 |
| .50178210+00 | .14562416+01 | .37813680+00 | .11652229+01 | .63926306+00 |
| .50614538+00 | .14568929+01 | .37465132+00 | .11730592+01 | .65023715+00 |
| .51050866+00 | .14575778+01 | .37120145+00 | .11811566+01 | .66147925+00 |
| .51487195+00 | .14582960+01 | .36778509+00 | .11895285+01 | .67300254+00 |
| .51923523+00 | .14590471+01 | .36440017+00 | .11981890+01 | .68482106+00 |
| .52359851+00 | .14598309+01 | .36104465+00 | .12071535+01 | .69695000+00 |
| .52796180+00 | .14606472+01 | .35771651+00 | .12164386+01 | .70940552+00 |
| .53232508+00 | .14614959+01 | .35441375+00 | .12260620+01 | .72220516+00 |
| .53581571+00 | .14621981+01 | .35178843+00 | .12340175+01 | .73270534+00 |
| .53930634+00 | .14629211+01 | .34917706+00 | .12422124+01 | .74344812+00 |
| .54279696+00 | .14636649+01 | .34657855+00 | .12506584+01 | .75444461+00 |
| .54628759+00 | .14644297+01 | .34399191+00 | .12593675+01 | .76570664+00 |
| .54977822+00 | .14652156+01 | .34141605+00 | .12683529+01 | .77724675+00 |
| .55326884+00 | .14660227+01 | .33884992+00 | .12776284+01 | .78907844+00 |
| .55675947+00 | .14668514+01 | .33629247+00 | .12872093+01 | .80121621+00 |
| .56025010+00 | .14677018+01 | .33374251+00 | .12971117+01 | .81367557+00 |
| .56374072+00 | .14685743+01 | .33119901+00 | .13073532+01 | .82647321+00 |
| .56723135+00 | .14694693+01 | .32866073+00 | .13179526+01 | .83962717+00 |
| .56984932+00 | .14701556+01 | .32675976+00 | .13261494+01 | .84973813+00 |
| .57246729+00 | .14708549+01 | .32486057+00 | .13345682+01 | .86006919+00 |
| .57508526+00 | .14715675+01 | .32296260+00 | .13432190+01 | .87062965+00 |
| .57770323+00 | .14722937+01 | .32106531+00 | .13521123+01 | .88142944+00 |
| .58032120+00 | .14730337+01 | .31916812+00 | .13612593+01 | .89247917+00 |
| .58293917+00 | .14737878+01 | .31727047+00 | .13706718+01 | .90378997+00 |
| .58555714+00 | .14745562+01 | .31537174+00 | .13803629+01 | .91537392+00 |
| .58817511+00 | .14753394+01 | .31347125+00 | .13903462+01 | .92724396+00 |
| .59079298+00 | .14761379+01 | .31156837+00 | .14006360+01 | .93941320+00 |



TABLE 183. (Concluded)

$$M_{\infty} = .29999890+01$$

$$\Theta_s = .43633230+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .59341037+00 | .14769527+01 | .30966224+00 | .14112469+01 | .95189478+00 |
| .59515530+00 | .14775046+01 | .30838942+00 | .14185083+01 | .96039825+00 |
| .59690022+00 | .14780639+01 | .30711472+00 | .14259262+01 | .96905347+00 |
| .59864515+00 | .14786304+01 | .30583782+00 | .14335062+01 | .97786580+00 |
| .60039008+00 | .14792045+01 | .30455858+00 | .14412542+01 | .98684055+00 |
| .60213500+00 | .14797863+01 | .30327671+00 | .14491764+01 | .99598367+00 |
| .60387993+00 | .14803758+01 | .30199192+00 | .14572797+01 | .10053013+01 |
| .60562485+00 | .14809735+01 | .30070396+00 | .14655709+01 | .10147999+01 |
| .60736978+00 | .14815794+01 | .29941258+00 | .14740575+01 | .10244862+01 |
| .60911471+00 | .14821936+01 | .29811748+00 | .14827473+01 | .10343674+01 |
| .61085963+00 | .14828165+01 | .29681832+00 | .14916487+01 | .10444512+01 |
| .61173210+00 | .14831312+01 | .29616711+00 | .14961815+01 | .10495716+01 |
| .61260456+00 | .14834482+01 | .29551481+00 | .15007705+01 | .10547457+01 |
| .61347702+00 | .14837675+01 | .29486131+00 | .15054170+01 | .10599746+01 |
| .61434948+00 | .14840891+01 | .29420660+00 | .15101222+01 | .10652595+01 |
| .61522195+00 | .14844130+01 | .29355061+00 | .15148872+01 | .10706014+01 |
| .61609441+00 | .14847393+01 | .29289335+00 | .15197136+01 | .10760017+01 |
| .61696687+00 | .14850680+01 | .29223474+00 | .15246026+01 | .10814614+01 |
| .61783934+00 | .14853991+01 | .29157468+00 | .15295555+01 | .10869819+01 |
| .61871180+00 | .14857327+01 | .29091320+00 | .15345739+01 | .10925645+01 |
| .61958426+00 | .14860689+01 | .29025023+00 | .15396592+01 | .10982105+01 |
| .62045673+00 | .14864076+01 | .28958569+00 | .15448130+01 | .11039214+01 |
| .62132919+00 | .14867489+01 | .28891955+00 | .15500369+01 | .11096986+01 |
| .62220165+00 | .14870929+01 | .28825178+00 | .15553324+01 | .11155435+01 |
| .62307411+00 | .14874395+01 | .28758223+00 | .15607013+01 | .11214577+01 |
| .62394658+00 | .14877888+01 | .28691096+00 | .15661454+01 | .11274429+01 |
| .62481904+00 | .14881409+01 | .28623783+00 | .15716664+01 | .11335005+01 |
| .62569150+00 | .14884959+01 | .28556281+00 | .15772664+01 | .11396324+01 |
| .62656397+00 | .14888537+01 | .28488581+00 | .15829473+01 | .11458404+01 |
| .62701923+00 | .14890416+01 | .28453176+00 | .15859443+01 | .11491106+01 |

$$.15805227+00 = \Delta S/R$$

$$.42165381+01 = P_s/P_{\infty}$$

$$.22259162+01 = \rho_s/\rho_{\infty}$$

$$.10942933+01 = T_s/T_{\infty}$$

TABLE 184. CONICAL FLOWFIELD  $\theta_s = 25.0 \text{ DEG}$ ;  $M_\infty = 4.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .78380357+00 | .39999610+01 | .43633230+00 | .57655303+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .43633230+00 | .15675777+01 | .43633230+00 | .10722535+01 | .50000000+00 |
| .43982296+00 | .15675966+01 | .43286734+00 | .10778534+01 | .50719928+00 |
| .44331361+00 | .15676524+01 | .42945209+00 | .10835958+01 | .51452908+00 |
| .44680427+00 | .15677437+01 | .42608412+00 | .10894858+01 | .52199412+00 |
| .45029493+00 | .15678695+01 | .42276112+00 | .10955291+01 | .52959944+00 |
| .45378558+00 | .15680286+01 | .41948087+00 | .11017315+01 | .53735033+00 |
| .45727624+00 | .15682201+01 | .41624127+00 | .11080991+01 | .54525230+00 |
| .46076690+00 | .15684431+01 | .41304029+00 | .11146384+01 | .55331128+00 |
| .46425755+00 | .15686968+01 | .40987598+00 | .11213566+01 | .56153350+00 |
| .46774821+00 | .15689804+01 | .40674646+00 | .11282607+01 | .56992543+00 |
| .47123887+00 | .15692933+01 | .40364993+00 | .11353588+01 | .57849416+00 |
| .47472952+00 | .15696348+01 | .40058461+00 | .11426591+01 | .58724698+00 |
| .47822018+00 | .15700045+01 | .39754881+00 | .11501705+01 | .59619171+00 |
| .48171084+00 | .15704019+01 | .39454084+00 | .11579025+01 | .60533671+00 |
| .48520149+00 | .15708264+01 | .39155909+00 | .11658649+01 | .61469076+00 |
| .48869215+00 | .15712779+01 | .38860195+00 | .11740687+01 | .62426334+00 |
| .49131014+00 | .15716340+01 | .38639930+00 | .11803868+01 | .63159218+00 |
| .49392813+00 | .15720050+01 | .38420895+00 | .11868522+01 | .63905401+00 |
| .49654613+00 | .15723907+01 | .38203025+00 | .11934704+01 | .64665358+00 |
| .49916412+00 | .15727911+01 | .37986256+00 | .12002470+01 | .65439583+00 |
| .50178210+00 | .15732061+01 | .37770521+00 | .12071881+01 | .66228596+00 |
| .50440007+00 | .15736358+01 | .37555757+00 | .12143000+01 | .67032949+00 |
| .50701804+00 | .15740800+01 | .37341901+00 | .12215895+01 | .67853221+00 |
| .50963601+00 | .15745389+01 | .37128886+00 | .12290638+01 | .68690033+00 |
| .51225398+00 | .15750124+01 | .36916649+00 | .12367303+01 | .69544021+00 |
| .51487195+00 | .15755005+01 | .36705125+00 | .12445971+01 | .70415886+00 |
| .51748992+00 | .15760034+01 | .36494247+00 | .12526727+01 | .71306343+00 |
| .52010789+00 | .15765211+01 | .36283948+00 | .12609660+01 | .72216168+00 |
| .52272586+00 | .15770537+01 | .36074162+00 | .12694869+01 | .73146176+00 |
| .52534383+00 | .15776013+01 | .35864817+00 | .12782454+01 | .74097243+00 |
| .52796180+00 | .15781641+01 | .35655846+00 | .12872525+01 | .75070292+00 |
| .52970711+00 | .15785479+01 | .35516704+00 | .12934010+01 | .75731687+00 |
| .53145242+00 | .15789385+01 | .35377672+00 | .12996689+01 | .76403596+00 |
| .53319774+00 | .15793360+01 | .35238729+00 | .13060599+01 | .77086346+00 |
| .53494305+00 | .15797407+01 | .35099855+00 | .13125780+01 | .77780268+00 |
| .53668837+00 | .15801523+01 | .34961022+00 | .13192275+01 | .78485718+00 |
| .53843368+00 | .15805711+01 | .34822133+00 | .13260127+01 | .79203066+00 |
| .54017899+00 | .15809972+01 | .34683400+00 | .13329382+01 | .79932699+00 |
| .54192431+00 | .15814307+01 | .34544555+00 | .13400090+01 | .80675024+00 |
| .54366962+00 | .15818716+01 | .34405659+00 | .13472301+01 | .81430467+00 |

TABLE 184. (Concluded)

$$M_{\infty} = .39999610+01$$

$$\Theta_s = .43633230+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .54541493+00 | .15823200+01 | .34266680+00 | .13546070+01 | .82199483+00 |
| .54716015+00 | .15827763+01 | .34127592+00 | .13621446+01 | .82982479+00 |
| .54890507+00 | .15832408+01 | .33988356+00 | .13698483+01 | .83779881+00 |
| .55065000+00 | .15837133+01 | .33848953+00 | .13777255+01 | .84592329+00 |
| .55239493+00 | .15841938+01 | .33709360+00 | .13857828+01 | .85420377+00 |
| .55413985+00 | .15846826+01 | .33569544+00 | .13940274+01 | .86264608+00 |
| .55501232+00 | .15849901+01 | .33499542+00 | .13982221+01 | .86692979+00 |
| .55588478+00 | .15851797+01 | .33429471+00 | .14024664+01 | .87125628+00 |
| .55675724+00 | .15854315+01 | .33359329+00 | .14067613+01 | .87562635+00 |
| .55762970+00 | .15856853+01 | .33289110+00 | .14111079+01 | .88004087+00 |
| .55850217+00 | .15859414+01 | .33218811+00 | .14155070+01 | .88450067+00 |
| .55937463+00 | .15861997+01 | .33148429+00 | .14199600+01 | .88900668+00 |
| .56024709+00 | .15864602+01 | .33077955+00 | .14244679+01 | .89355986+00 |
| .56111956+00 | .15867230+01 | .33007386+00 | .14290317+01 | .89816108+00 |
| .56199202+00 | .15869880+01 | .32936718+00 | .14336528+01 | .90281133+00 |
| .56286448+00 | .15872554+01 | .32865950+00 | .14383324+01 | .90751168+00 |
| .56373695+00 | .15875250+01 | .32795070+00 | .14430716+01 | .91226310+00 |
| .56460941+00 | .15877971+01 | .32724079+00 | .14478720+01 | .91706676+00 |
| .56548187+00 | .15880716+01 | .32652969+00 | .14527347+01 | .92192370+00 |
| .56635433+00 | .15883484+01 | .32581733+00 | .14576611+01 | .92683496+00 |
| .56722680+00 | .15886278+01 | .32510367+00 | .14626528+01 | .93180189+00 |
| .56809926+00 | .15889096+01 | .32438868+00 | .14677111+01 | .93682556+00 |
| .56897172+00 | .15891939+01 | .32367224+00 | .14728377+01 | .94190735+00 |
| .56984419+00 | .15894808+01 | .32295436+00 | .14780341+01 | .94704849+00 |
| .57071665+00 | .15897703+01 | .32223497+00 | .14833020+01 | .95225035+00 |
| .57158911+00 | .15900625+01 | .32151397+00 | .14886431+01 | .95751434+00 |
| .57246158+00 | .15903572+01 | .32079131+00 | .14940591+01 | .96284178+00 |
| .57333404+00 | .15906547+01 | .32006696+00 | .14995518+01 | .96823424+00 |
| .57420650+00 | .15909550+01 | .31934081+00 | .15051233+01 | .97369332+00 |
| .57507896+00 | .15912581+01 | .31861280+00 | .15107753+01 | .97922051+00 |
| .57595143+00 | .15915640+01 | .31788289+00 | .15165099+01 | .98481748+00 |
| .57682390+00 | .15918727+01 | .31737839+00 | .15205135+01 | .98871838+00 |

$$.36612475+00 = \Delta S/R$$

$$.64649110+01 = P_s/P_{\infty}$$

$$.26468146+01 = \rho_s/\rho_{\infty}$$

$$.24425251+01 = T_s/T_{\infty}$$

18 TABLE 185. CONICAL FLOWFIELD  $\theta_s = 25.0 \text{ DEG}$ ;  $M_\infty = 5.0$

| $\underline{u_s}$    | $\underline{M_\infty}$ | $\underline{\theta_s}$ | $\underline{\theta_w}$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .81474376+00         | .49999911+01           | .43633230+00           | .55256239+00           |                 |
| $\underline{\theta}$ | $\underline{M_1^*}$    | $\underline{\psi_1}$   | $\underline{x}$        | $\underline{r}$ |
| .43633230+00         | .16294570+01           | .43633230+00           | .10722535+01           | .50000000+00    |
| .43982296+00         | .16294766+01           | .43286728+00           | .10789034+01           | .50769339+00    |
| .44331361+00         | .16295346+01           | .42945159+00           | .10857398+01           | .51554713+00    |
| .44680427+00         | .16296296+01           | .42608245+00           | .10927703+01           | .52356777+00    |
| .45029493+00         | .16297605+01           | .42275723+00           | .11000032+01           | .53176226+00    |
| .45378558+00         | .16299261+01           | .41947339+00           | .11074474+01           | .54013813+00    |
| .45727624+00         | .16301255+01           | .41622851+00           | .11151122+01           | .54870319+00    |
| .46076690+00         | .16303580+01           | .41302028+00           | .11230078+01           | .55746587+00    |
| .46382122+00         | .16305878+01           | .41024138+00           | .11301141+01           | .56530231+00    |
| .46687555+00         | .16308417+01           | .40748737+00           | .11374129+01           | .57330327+00    |
| .46992987+00         | .16311195+01           | .40475683+00           | .11449125+01           | .58147547+00    |
| .47298419+00         | .16314207+01           | .40204838+00           | .11526213+01           | .58982607+00    |
| .47603852+00         | .16317450+01           | .39936066+00           | .11605488+01           | .59836268+00    |
| .47909284+00         | .16320921+01           | .39669235+00           | .11687046+01           | .60709337+00    |
| .48214717+00         | .16324619+01           | .39404213+00           | .11770993+01           | .61602670+00    |
| .48476516+00         | .16327966+01           | .39178392+00           | .11844933+01           | .62385204+00    |
| .48738315+00         | .16331478+01           | .38953722+00           | .11920785+01           | .63183913+00    |
| .49000115+00         | .16335153+01           | .38730124+00           | .11998629+01           | .63999442+00    |
| .49261914+00         | .16338990+01           | .38507515+00           | .12078550+01           | .64832482+00    |
| .49523713+00         | .16342991+01           | .38285816+00           | .12160638+01           | .65683761+00    |
| .49785512+00         | .16347154+01           | .38064944+00           | .12244988+01           | .66554046+00    |
| .50047311+00         | .16351480+01           | .37844817+00           | .12331702+01           | .67444166+00    |
| .50265475+00         | .16355210+01           | .37661885+00           | .12405847+01           | .68201708+00    |
| .50483640+00         | .16359054+01           | .37479365+00           | .12481777+01           | .68974169+00    |
| .50701804+00         | .16363012+01           | .37297206+00           | .12559561+01           | .69762112+00    |
| .50919968+00         | .16367086+01           | .37115361+00           | .12639275+01           | .70566142+00    |
| .51138132+00         | .16371277+01           | .36933777+00           | .12720998+01           | .71386885+00    |
| .51356296+00         | .16375584+01           | .36752402+00           | .12804815+01           | .72225022+00    |
| .51574460+00         | .16380011+01           | .36571184+00           | .12890815+01           | .73081265+00    |
| .51748992+00         | .16383638+01           | .36426285+00           | .12961252+01           | .73779805+00    |
| .51923523+00         | .16387343+01           | .36281423+00           | .13033197+01           | .74490819+00    |
| .52098054+00         | .16391126+01           | .36136569+00           | .13106707+01           | .75214744+00    |
| .52272586+00         | .16394989+01           | .35991693+00           | .13181837+01           | .75952027+00    |
| .52447117+00         | .16398932+01           | .35846764+00           | .13258649+01           | .76703145+00    |
| .52621648+00         | .16402956+01           | .35701750+00           | .13337205+01           | .77468598+00    |
| .52796151+00         | .16407067+01           | .35556603+00           | .13417560+01           | .78248787+00    |
| .52927020+00         | .16410207+01           | .35447645+00           | .13479053+01           | .78843982+00    |
| .53057890+00         | .16413395+01           | .35338583+00           | .13541638+01           | .79448099+00    |
| .53188759+00         | .16416631+01           | .35229409+00           | .13605345+01           | .80061391+00    |
| .53319629+00         | .16419916+01           | .35120106+00           | .13670211+01           | .80684132+00    |

TABLE 185. (Concluded)

$$M_{\infty} = .49999911+01$$

$$\Theta_s = .43633230+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .53450498+00 | .16423251+01 | .35010656+00 | .13736269+01 | .81316599+00 |
| .53581367+00 | .16426636+01 | .34901045+00 | .13803559+01 | .81959084+00 |
| .53712237+00 | .16430073+01 | .34791256+00 | .13872119+01 | .82611899+00 |
| .53799483+00 | .16432392+01 | .34717954+00 | .13918551+01 | .83052999+00 |
| .53886729+00 | .16434735+01 | .34644560+00 | .13965578+01 | .83498926+00 |
| .53973976+00 | .16437102+01 | .34571071+00 | .14013214+01 | .83949791+00 |
| .54061222+00 | .16439492+01 | .34497477+00 | .14061472+01 | .84405690+00 |
| .54148468+00 | .16441907+01 | .34423774+00 | .14110366+01 | .84866732+00 |
| .54235715+00 | .16444346+01 | .34349959+00 | .14159910+01 | .85333034+00 |
| .54322961+00 | .16446809+01 | .34276023+00 | .14210119+01 | .85804709+00 |
| .54366584+00 | .16448051+01 | .34239006+00 | .14235479+01 | .86042599+00 |
| .54410207+00 | .16449298+01 | .34201959+00 | .14261010+01 | .86281874+00 |
| .54453830+00 | .16450552+01 | .34164875+00 | .14286715+01 | .86522558+00 |
| .54497454+00 | .16451812+01 | .34127761+00 | .14312597+01 | .86764663+00 |
| .54541077+00 | .16453079+01 | .34090611+00 | .14338657+01 | .87008200+00 |
| .54584700+00 | .16454352+01 | .34053426+00 | .14364897+01 | .87253186+00 |
| .54628323+00 | .16455632+01 | .34016201+00 | .14391320+01 | .87499648+00 |
| .54671946+00 | .16456918+01 | .33978947+00 | .14417928+01 | .87747591+00 |
| .54715569+00 | .16458210+01 | .33941648+00 | .14444723+01 | .87997037+00 |
| .54759192+00 | .16459510+01 | .33904311+00 | .14471706+01 | .88248001+00 |
| .54802816+00 | .16460816+01 | .33866936+00 | .14498881+01 | .88500504+00 |
| .54846439+00 | .16462129+01 | .33829520+00 | .14526250+01 | .88754568+00 |
| .54890062+00 | .16463449+01 | .33792063+00 | .14553816+01 | .89010203+00 |
| .54933685+00 | .16464775+01 | .33754560+00 | .14581580+01 | .89267432+00 |
| .54977308+00 | .16466109+01 | .33717018+00 | .14609545+01 | .89526275+00 |
| .55020931+00 | .16467449+01 | .33679431+00 | .14637714+01 | .89786746+00 |
| .55064555+00 | .16468796+01 | .33641798+00 | .14666089+01 | .90048874+00 |
| .55108178+00 | .16470151+01 | .33604119+00 | .14694674+01 | .90312676+00 |
| .55151801+00 | .16471512+01 | .33566391+00 | .14723469+01 | .90578160+00 |
| .55195424+00 | .16472881+01 | .33528616+00 | .14752479+01 | .90845362+00 |
| .55239047+00 | .16474256+01 | .33490791+00 | .14781707+01 | .91114304+00 |
| .55256239+00 | .16474801+01 | .33475873+00 | .14793285+01 | .91220772+00 |

$$.62319523+00 = \Delta S/R$$

$$.93523279+01 = P_s/P_{\infty}$$

$$.29804157+01 = \rho_s/\rho_{\infty}$$

$$.31379274+01 = T_s/T_{\infty}$$



TABLE 186. CONICAL FLOWFIELD  $\theta_s = 25.0$  DEG;  $M_\infty = 6.0$

| $\underline{u_s}$    | $\underline{M_\infty}$ | $\underline{\theta_s}$ | $\underline{\theta_w}$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .83283937+00         | .59999726+01           | .43633230+00           | .53929635+00           |                 |
| $\underline{\theta}$ | $\underline{M_1^*}$    | $\underline{\psi_1}$   | $\underline{x}$        | $\underline{r}$ |
| .43633230+00         | .16656475+01           | .43633230+00           | .10722535+01           | .50000000+00    |
| .43982296+00         | .16656676+01           | .43286723+00           | .10796223+01           | .50803165+00    |
| .44331361+00         | .16657269+01           | .42945121+00           | .10872113+01           | .51624584+00    |
| .44680427+00         | .16658240+01           | .42608119+00           | .10950303+01           | .52465060+00    |
| .45029493+00         | .16659578+01           | .42275428+00           | .11030902+01           | .53325459+00    |
| .45378558+00         | .16661272+01           | .41946770+00           | .11114023+01           | .54206707+00    |
| .45727624+00         | .16663314+01           | .41621881+00           | .11199788+01           | .55109787+00    |
| .46033056+00         | .16665378+01           | .41340493+00           | .11277107+01           | .55918721+00    |
| .46338489+00         | .16667697+01           | .41061629+00           | .11356644+01           | .56745931+00    |
| .46643921+00         | .16670267+01           | .40785128+00           | .11438503+01           | .57592219+00    |
| .46949354+00         | .16673082+01           | .40510832+00           | .11522789+01           | .58458439+00    |
| .47254786+00         | .16676141+01           | .40238587+00           | .11609618+01           | .59345502+00    |
| .47560219+00         | .16679441+01           | .39968240+00           | .11699113+01           | .60254385+00    |
| .47822018+00         | .16682459+01           | .39737912+00           | .11778044+01           | .61051575+00    |
| .48083817+00         | .16685652+01           | .39508774+00           | .11859120+01           | .61866262+00    |
| .48345616+00         | .16689017+01           | .39280732+00           | .11942436+01           | .62699182+00    |
| .48607416+00         | .16692555+01           | .39053694+00           | .12028092+01           | .63551131+00    |
| .48869215+00         | .16696266+01           | .38827566+00           | .12116193+01           | .64422935+00    |
| .49131014+00         | .16700150+01           | .38602252+00           | .12206858+01           | .65315502+00    |
| .49349180+00         | .16703519+01           | .38415045+00           | .12284458+01           | .66075856+00    |
| .49567346+00         | .16707008+01           | .38228283+00           | .12363997+01           | .66851877+00    |
| .49785512+00         | .16710618+01           | .38041909+00           | .12445557+01           | .67644184+00    |
| .50003678+00         | .16714351+01           | .37855865+00           | .12529223+01           | .68453442+00    |
| .50221843+00         | .16718206+01           | .37670093+00           | .12615085+01           | .69280341+00    |
| .50440007+00         | .16722185+01           | .37484534+00           | .12703237+01           | .70125622+00    |
| .50614538+00         | .16725458+01           | .37336199+00           | .12775479+01           | .70815621+00    |
| .50789069+00         | .16728812+01           | .37187931+00           | .12849310+01           | .71518321+00    |
| .50963601+00         | .16732247+01           | .37039696+00           | .12924789+01           | .72234176+00    |
| .51138132+00         | .16735764+01           | .36891460+00           | .13001976+01           | .72963659+00    |
| .51312663+00         | .16739365+01           | .36743191+00           | .13080938+01           | .73707265+00    |
| .51487195+00         | .16743050+01           | .36594852+00           | .13161743+01           | .74465527+00    |
| .51618084+00         | .16745872+01           | .36483525+00           | .13223596+01           | .75044130+00    |
| .51748953+00         | .16748745+01           | .36372113+00           | .13286551+01           | .75631452+00    |
| .51879822+00         | .16751669+01           | .36260610+00           | .13350650+01           | .76227828+00    |
| .52010692+00         | .16754641+01           | .36148999+00           | .13415928+01           | .76833531+00    |
| .52141561+00         | .16757664+01           | .36037263+00           | .13482424+01           | .77448843+00    |
| .52272431+00         | .16760738+01           | .35925387+00           | .13550174+01           | .78074054+00    |
| .52359677+00         | .16762816+01           | .35850714+00           | .13596058+01           | .78496514+00    |
| .52446923+00         | .16764918+01           | .35775965+00           | .13642531+01           | .78923603+00    |
| .52534170+00         | .16767043+01           | .35701135+00           | .13689605+01           | .79355420+00    |

TABLE 186. (Concluded)

$$M_{\infty} = .59999726+01$$

$$\Theta_s = .43633230+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .52621416+00 | .16769191+01 | .35626216+00 | .13737293+01 | .79792066+00 |
| .52708662+00 | .16771363+01 | .35551205+00 | .13785610+01 | .80233646+00 |
| .52795909+00 | .16773560+01 | .35476093+00 | .13834570+01 | .80680267+00 |
| .52839532+00 | .16774668+01 | .35438499+00 | .13859295+01 | .80905502+00 |
| .52883155+00 | .16775781+01 | .35400878+00 | .13884187+01 | .81132036+00 |
| .52926778+00 | .16776901+01 | .35363230+00 | .13909246+01 | .81359889+00 |
| .52970401+00 | .16778027+01 | .35325550+00 | .13934476+01 | .81589070+00 |
| .53014024+00 | .16779160+01 | .35287842+00 | .13959878+01 | .81819600+00 |
| .53057647+00 | .16780298+01 | .35250105+00 | .13985454+01 | .82051490+00 |
| .53101271+00 | .16781443+01 | .35212334+00 | .14011206+01 | .82284754+00 |
| .53144894+00 | .16782594+01 | .35174533+00 | .14037136+01 | .82519414+00 |
| .53188517+00 | .16783753+01 | .35136701+00 | .14063247+01 | .82755477+00 |
| .53232140+00 | .16784917+01 | .35098833+00 | .14089540+01 | .82992966+00 |
| .53275763+00 | .16786087+01 | .35060932+00 | .14116017+01 | .83231895+00 |
| .53319386+00 | .16787264+01 | .35022994+00 | .14142682+01 | .83472286+00 |
| .53363010+00 | .16788448+01 | .34985019+00 | .14169536+01 | .83714144+00 |
| .53406633+00 | .16789639+01 | .34947011+00 | .14196581+01 | .83957496+00 |
| .53450256+00 | .16790836+01 | .34908963+00 | .14223821+01 | .84202362+00 |
| .53493879+00 | .16792040+01 | .34870875+00 | .14251256+01 | .84448754+00 |
| .53537502+00 | .16793251+01 | .34832747+00 | .14278890+01 | .84696687+00 |
| .53581125+00 | .16794468+01 | .34794578+00 | .14306726+01 | .84946190+00 |
| .53624748+00 | .16795692+01 | .34756366+00 | .14334766+01 | .85197276+00 |
| .53668372+00 | .16796923+01 | .34718116+00 | .14363011+01 | .85449959+00 |
| .53711995+00 | .16798162+01 | .34679819+00 | .14391466+01 | .85704266+00 |
| .53755618+00 | .16799407+01 | .34641479+00 | .14420133+01 | .85960220+00 |
| .53799241+00 | .16800659+01 | .34603088+00 | .14449014+01 | .86217836+00 |
| .53842864+00 | .16801919+01 | .34564657+00 | .14478112+01 | .86477136+00 |
| .53886487+00 | .16803185+01 | .34526175+00 | .14507430+01 | .86738135+00 |
| .53929635+00 | .16804445+01 | .34488063+00 | .14536648+01 | .86997990+00 |

$$.89944530+00 = \Delta S/R$$

$$.12878821+02 = P_s/P_{\infty}$$

$$.32333894+01 = \rho_s/\rho_{\infty}$$

$$.39830715+01 = T_s/T_{\infty}$$

TABLE 187. CONICAL FLOWFIELD  $\theta_s = 25.0$  DEG;  $M_\infty = 8.0$

| $\underline{u_s}$    | $\underline{M_\infty}$ | $\underline{\theta_s}$ | $\underline{\theta_w}$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .85184940+00         | .80000042+01           | .43633230+00           | .52590795+00           |                 |
| $\underline{\theta}$ | $\underline{M_1^*}$    | $\underline{\psi_1}$   | $\underline{x}$        | $\underline{r}$ |
| .43633230+00         | .17036669+01           | .43633230+00           | .10722535+01           | .50000000+00    |
| .43895029+00         | .17036785+01           | .43372875+00           | .10784084+01           | .50631147+00    |
| .44156829+00         | .17037128+01           | .43115307+00           | .10847108+01           | .51274041+00    |
| .44418628+00         | .17037693+01           | .42860379+00           | .10911659+01           | .51929102+00    |
| .44680427+00         | .17038474+01           | .42607953+00           | .10977794+01           | .52596772+00    |
| .44942226+00         | .17039467+01           | .42357890+00           | .11045573+01           | .53277518+00    |
| .45204026+00         | .17040666+01           | .42110061+00           | .11115063+01           | .53971843+00    |
| .45465825+00         | .17042069+01           | .41864339+00           | .11186329+01           | .54680260+00    |
| .45727624+00         | .17043671+01           | .41620599+00           | .11259443+01           | .55403322+00    |
| .45989423+00         | .17045470+01           | .41378722+00           | .11334481+01           | .56141615+00    |
| .46207589+00         | .17047116+01           | .41178496+00           | .11398540+01           | .56768934+00    |
| .46425755+00         | .17048896+01           | .40979414+00           | .11464041+01           | .57407638+00    |
| .46643921+00         | .17050807+01           | .40781412+00           | .11531036+01           | .58058117+00    |
| .46862087+00         | .17052849+01           | .40584423+00           | .11599579+01           | .58720795+00    |
| .47080253+00         | .17055020+01           | .40388384+00           | .11669728+01           | .59396107+00    |
| .47298419+00         | .17057320+01           | .40193230+00           | .11741544+01           | .60084513+00    |
| .47516586+00         | .17059749+01           | .39998897+00           | .11815092+01           | .60786504+00    |
| .47734752+00         | .17062305+01           | .39805322+00           | .11890439+01           | .61502592+00    |
| .47952918+00         | .17064989+01           | .39612441+00           | .11967659+01           | .62233327+00    |
| .48172450+00         | .17067727+01           | .39458593+00           | .12030833+01           | .62828844+00    |
| .48301983+00         | .17069548+01           | .39305115+00           | .12095296+01           | .63434410+00    |
| .48476516+00         | .17071949+01           | .39151975+00           | .12161090+01           | .64050347+00    |
| .48651049+00         | .17074433+01           | .38999139+00           | .12228260+01           | .64676999+00    |
| .48825582+00         | .17076999+01           | .38846573+00           | .12296855+01           | .65314721+00    |
| .49000115+00         | .17079646+01           | .38694244+00           | .12366925+01           | .65963891+00    |
| .49174647+00         | .17082377+01           | .38542116+00           | .12438522+01           | .66624901+00    |
| .49349180+00         | .17085191+01           | .38390155+00           | .12511703+01           | .67298169+00    |
| .49523713+00         | .17088089+01           | .38238325+00           | .12586525+01           | .67984122+00    |
| .49698246+00         | .17090317+01           | .38124517+00           | .12643757+01           | .68507194+00    |
| .49872779+00         | .17092594+01           | .38010747+00           | .12701975+01           | .69037864+00    |
| .49997312+00         | .17094918+01           | .37896999+00           | .12761207+01           | .69576351+00    |
| .50047311+00         | .17097291+01           | .37783256+00           | .12821483+01           | .70122865+00    |
| .50178210+00         | .17099713+01           | .37669502+00           | .12882834+01           | .70677634+00    |
| .50309108+00         | .17102184+01           | .37555721+00           | .12945292+01           | .71240905+00    |
| .50440007+00         | .17104705+01           | .37441894+00           | .13008892+01           | .71812925+00    |
| .50570896+00         | .17107277+01           | .37327998+00           | .13073664+01           | .72393914+00    |
| .50701765+00         | .17109904+01           | .37214008+00           | .13139640+01           | .72984096+00    |
| .50789011+00         | .17111684+01           | .37137961+00           | .13184317+01           | .73382846+00    |
| .50876258+00         | .17113487+01           | .37061865+00           | .13229564+01           | .73785938+00    |
| .50963504+00         | .17115313+01           | .36985714+00           | .13275391+01           | .74193459+00    |

TABLE 187. (Concluded)

$$M_{\infty} = .80000042+01$$

$$\Theta_s = .43633230+00$$

| $\underline{e}$ | $\underline{M}_1^*$ | $\underline{\psi}_1$ | $\underline{x}$ | $\underline{r}$ |
|-----------------|---------------------|----------------------|-----------------|-----------------|
| .51050750+00    | .17117163+01        | .36909501+00         | .13321811+01    | .74605498+00    |
| .51137996+00    | .17119036+01        | .36833222+00         | .13368839+01    | .75022162+00    |
| .51225243+00    | .17120933+01        | .36756871+00         | .13416487+01    | .75443540+00    |
| .51312489+00    | .17122853+01        | .36680440+00         | .13464770+01    | .75869742+00    |
| .51399735+00    | .17124798+01        | .36603926+00         | .13513701+01    | .76300865+00    |
| .51486982+00    | .17126768+01        | .36527321+00         | .13563297+01    | .76737027+00    |
| .51530605+00    | .17127762+01        | .36488982+00         | .13588348+01    | .76957027+00    |
| .51574228+00    | .17128763+01        | .36450619+00         | .13613571+01    | .77178331+00    |
| .51617851+00    | .17129769+01        | .36412229+00         | .13638968+01    | .77400951+00    |
| .51661474+00    | .17130782+01        | .36373811+00         | .13664540+01    | .77624901+00    |
| .51705097+00    | .17131801+01        | .36335365+00         | .13690291+01    | .77850201+00    |
| .51748721+00    | .17132827+01        | .36296891+00         | .13716222+01    | .78076861+00    |
| .51792344+00    | .17133859+01        | .36258388+00         | .13742336+01    | .78304900+00    |
| .51835967+00    | .17134897+01        | .36219854+00         | .13768633+01    | .78534327+00    |
| .51879590+00    | .17135942+01        | .36181287+00         | .13795118+01    | .78765167+00    |
| .51923213+00    | .17136993+01        | .36142689+00         | .13821791+01    | .78997436+00    |
| .51966836+00    | .17138051+01        | .36104058+00         | .13848656+01    | .79231144+00    |
| .52010459+00    | .17139116+01        | .36065391+00         | .13875714+01    | .79466315+00    |
| .52054083+00    | .17140187+01        | .36026691+00         | .13902969+01    | .79702964+00    |
| .52097706+00    | .17141265+01        | .35987954+00         | .13930422+01    | .79941108+00    |
| .52141329+00    | .17142349+01        | .35949179+00         | .13958076+01    | .80180766+00    |
| .52184952+00    | .17143440+01        | .35910366+00         | .13985934+01    | .80421958+00    |
| .52228575+00    | .17144539+01        | .35871515+00         | .14013999+01    | .80664701+00    |
| .52272198+00    | .17145643+01        | .35832623+00         | .14042272+01    | .80909012+00    |
| .52315821+00    | .17146755+01        | .35793690+00         | .14070756+01    | .81154914+00    |
| .52359445+00    | .17147874+01        | .35754715+00         | .14099455+01    | .81402428+00    |
| .52403068+00    | .17149000+01        | .35715695+00         | .14128371+01    | .81651568+00    |
| .52446691+00    | .17150133+01        | .35676633+00         | .14157507+01    | .81902360+00    |
| .52490314+00    | .17151273+01        | .35637524+00         | .14186866+01    | .82154826+00    |
| .52533937+00    | .17152420+01        | .35598368+00         | .14216451+01    | .82408984+00    |
| .52577560+00    | .17153574+01        | .35559165+00         | .14246264+01    | .82664855+00    |
| .52590795+00    | .17153926+01        | .35547262+00         | .14255355+01    | .82742822+00    |

$$.14475520+01 = \Delta S/R$$

$$.21851765+02 = P_s/P_{\infty}$$

$$.35661760+01 = \rho_s/\rho_{\infty}$$

$$.61275062+01 = T_s/T_{\infty}$$

/ TABLE 188. CONICAL FLOWFIELD  $\theta_s = 25.0$  DEG;  $M_\infty = 10.0$

| $\underline{u_s}$    | $\underline{M_\infty}$ | $\underline{\theta_s}$ | $\underline{\theta_w}$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .86102030+00         | .99999948+01           | .43633230+00           | .51963622+00           |                 |
| $\underline{\theta}$ | $\underline{M_1^*}$    | $\underline{\psi_1}$   | $\underline{x}$        | $\underline{r}$ |
| .43633230+00         | .17220083+01           | .43633230+00           | .10722535+01           | .50000000+00    |
| .43895029+00         | .17220201+01           | .43372873+00           | .10787613+01           | .50647715+00    |
| .44156829+00         | .17220548+01           | .43115294+00           | .10854312+01           | .51308094+00    |
| .44418628+00         | .17221119+01           | .42860338+00           | .10922691+01           | .51981607+00    |
| .44680427+00         | .17221909+01           | .42607856+00           | .10992817+01           | .52668753+00    |
| .44942226+00         | .17222913+01           | .42357703+00           | .11064761+01           | .53370069+00    |
| .45204026+00         | .17224126+01           | .42109741+00           | .11138596+01           | .54086113+00    |
| .45465825+00         | .17225545+01           | .41863834+00           | .11214400+01           | .54817475+00    |
| .45727624+00         | .17227167+01           | .41619852+00           | .11292258+01           | .55564792+00    |
| .45945790+00         | .17228670+01           | .41417911+00           | .11358772+01           | .56200226+00    |
| .46163956+00         | .17230311+01           | .41217145+00           | .11426828+01           | .56847607+00    |
| .46382122+00         | .17232087+01           | .41017481+00           | .11496485+01           | .57507374+00    |
| .46600288+00         | .17233997+01           | .40818850+00           | .11567801+01           | .58179975+00    |
| .46818454+00         | .17236040+01           | .40621180+00           | .11640843+01           | .58865888+00    |
| .47036620+00         | .17238216+01           | .40424403+00           | .11715676+01           | .59565620+00    |
| .47254786+00         | .17240524+01           | .40228448+00           | .11792374+01           | .60279709+00    |
| .47472952+00         | .17242963+01           | .40033247+00           | .11871013+01           | .61008713+00    |
| .47647485+00         | .17245008+01           | .39877583+00           | .11935375+01           | .61603057+00    |
| .47822018+00         | .17247138+01           | .39722321+00           | .12001074+01           | .62207653+00    |
| .47996551+00         | .17249351+01           | .39567425+00           | .12068157+01           | .62822841+00    |
| .48171084+00         | .17251648+01           | .39412861+00           | .12136670+01           | .63448970+00    |
| .48345616+00         | .17254030+01           | .39258591+00           | .12206665+01           | .64086417+00    |
| .48520149+00         | .17256495+01           | .39104579+00           | .12278197+01           | .64735580+00    |
| .48694682+00         | .17259046+01           | .38950787+00           | .12351318+01           | .65396857+00    |
| .48869215+00         | .17261682+01           | .38797178+00           | .12426091+01           | .66070690+00    |
| .49000115+00         | .17263715+01           | .38682069+00           | .12483291+01           | .66584577+00    |
| .49131014+00         | .17265797+01           | .38567024+00           | .12541483+01           | .67105988+00    |
| .49261914+00         | .17267927+01           | .38452028+00           | .12600695+01           | .67635130+00    |
| .49392813+00         | .17270107+01           | .38337063+00           | .12660957+01           | .68172219+00    |
| .49523713+00         | .17272335+01           | .38222113+00           | .12722300+01           | .68717486+00    |
| .49654613+00         | .17274614+01           | .38107158+00           | .12784758+01           | .69271176+00    |
| .49785512+00         | .17276943+01           | .37992182+00           | .12848365+01           | .69833525+00    |
| .49916412+00         | .17279322+01           | .37877167+00           | .12913155+01           | .70404800+00    |
| .50003678+00         | .17280937+01           | .37800459+00           | .12957026+01           | .70790745+00    |
| .50090934+00         | .17282576+01           | .37723711+00           | .13001446+01           | .71180812+00    |
| .50178181+00         | .17284241+01           | .37646919+00           | .13046428+01           | .71575094+00    |
| .50265427+00         | .17285928+01           | .37570083+00           | .13091989+01           | .71973722+00    |
| .50352673+00         | .17287639+01           | .37493199+00           | .13138140+01           | .72376782+00    |
| .50439920+00         | .17289374+01           | .37416259+00           | .13184896+01           | .72784372+00    |
| .50527166+00         | .17291131+01           | .37339258+00           | .13232271+01           | .73196593+00    |



TABLE 188. (Concluded)

$$M_{\infty} = .99999948+01$$

$$\Theta_s = .43633230+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .50614412+00 | .17292914+01 | .37262189+00 | .13280278+01 | .73613545+00 |
| .50658035+00 | .17293814+01 | .37223627+00 | .13304523+01 | .73823828+00 |
| .50701658+00 | .17294720+01 | .37185047+00 | .13328931+01 | .74035326+00 |
| .50745282+00 | .17295632+01 | .37146445+00 | .13353505+01 | .74248064+00 |
| .50788905+00 | .17296551+01 | .37107822+00 | .13378245+01 | .74462046+00 |
| .50832528+00 | .17297475+01 | .37069178+00 | .13403155+01 | .74677295+00 |
| .50876151+00 | .17298406+01 | .37030511+00 | .13428237+01 | .74893822+00 |
| .50919774+00 | .17299343+01 | .36991820+00 | .13453491+01 | .75111634+00 |
| .50963397+00 | .17300286+01 | .36953107+00 | .13478921+01 | .75330758+00 |
| .51007020+00 | .17301236+01 | .36914366+00 | .13504528+01 | .75551200+00 |
| .51050644+00 | .17302192+01 | .36875600+00 | .13530314+01 | .75772980+00 |
| .51094267+00 | .17303154+01 | .36836807+00 | .13556282+01 | .75996107+00 |
| .51137890+00 | .17304122+01 | .36797985+00 | .13582434+01 | .76220606+00 |
| .51181513+00 | .17305098+01 | .36759134+00 | .13608772+01 | .76446485+00 |
| .51225136+00 | .17306080+01 | .36720254+00 | .13635298+01 | .76673764+00 |
| .51268759+00 | .17307067+01 | .36681345+00 | .13662015+01 | .76902460+00 |
| .51312383+00 | .17308062+01 | .36642404+00 | .13688925+01 | .77132591+00 |
| .51356006+00 | .17309064+01 | .36603430+00 | .13716031+01 | .77364174+00 |
| .51399629+00 | .17310071+01 | .36564422+00 | .13743334+01 | .77597222+00 |
| .51443252+00 | .17311086+01 | .36525380+00 | .13770038+01 | .77831756+00 |
| .51486875+00 | .17312107+01 | .36486302+00 | .13798545+01 | .78067794+00 |
| .51530498+00 | .17313135+01 | .36447187+00 | .13826457+01 | .78305352+00 |
| .51574121+00 | .17314170+01 | .36408035+00 | .13854577+01 | .78544452+00 |
| .51617745+00 | .17315211+01 | .36368844+00 | .13882908+01 | .78785112+00 |
| .51661368+00 | .17316260+01 | .36329613+00 | .13911453+01 | .79027353+00 |
| .51704991+00 | .17317315+01 | .36290341+00 | .13940213+01 | .79271192+00 |
| .51748614+00 | .17318378+01 | .36251027+00 | .13969194+01 | .79516652+00 |
| .51792237+00 | .17319447+01 | .36211669+00 | .13998396+01 | .79763754+00 |
| .51835860+00 | .17320523+01 | .36172269+00 | .14027824+01 | .80012513+00 |
| .51879483+00 | .17321607+01 | .36132822+00 | .14057479+01 | .80262959+00 |
| .51923107+00 | .17322698+01 | .36093328+00 | .14087366+01 | .80515108+00 |
| .51966730+00 | .17323717+01 | .36054605+00 | .14115333+01 | .80750842+00 |

$$.19513592+01 = \Delta S/R$$

$$.33385814+02 = P_s/P_{\infty}$$

$$.37594381+01 = \rho_s/\rho_{\infty}$$

$$.88805331+01 = T_s/T_{\infty}$$

TABLE 189. CONICAL FLOWFIELD  $\theta_s = 25.0$  DEG;  $M_\infty = 12.5$ 

| $\underline{u_s}$    | $\underline{M_\infty}$ | $\underline{\theta_s}$ | $\underline{\theta_w}$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .86702051+00         | .12500000+02           | .43633230+00           | .51559588+00           |                 |
| $\underline{\theta}$ | $\underline{M_1^*}$    | $\underline{\psi_1}$   | $\underline{x}$        | $\underline{r}$ |
| .43633230+00         | .17340085+01           | .43633230+00           | .10722535+01           | .50000000+00    |
| .43895029+00         | .17340203+01           | .43372872+00           | .10790093+01           | .50659358+00    |
| .44156829+00         | .17340553+01           | .43115285+00           | .10859378+01           | .51332042+00    |
| .44418628+00         | .17341128+01           | .42860308+00           | .10930457+01           | .52018563+00    |
| .44680427+00         | .17341923+01           | .42607785+00           | .11003403+01           | .52719470+00    |
| .44942226+00         | .17342934+01           | .42357567+00           | .11078293+01           | .53435338+00    |
| .45204026+00         | .17344157+01           | .42109507+00           | .11155208+01           | .54166779+00    |
| .45465825+00         | .17345587+01           | .41863466+00           | .11234237+01           | .54914442+00    |
| .45727624+00         | .17347221+01           | .41619307+00           | .11315472+01           | .55679023+00    |
| .45945790+00         | .17348737+01           | .41417181+00           | .11384924+01           | .56329620+00    |
| .46163956+00         | .17350390+01           | .41216192+00           | .11456038+01           | .56992924+00    |
| .46382122+00         | .17352181+01           | .41016266+00           | .11528877+01           | .57669408+00    |
| .46600288+00         | .17354108+01           | .40817327+00           | .11603511+01           | .58359573+00    |
| .46818454+00         | .17356170+01           | .40619303+00           | .11680011+01           | .59063955+00    |
| .47036620+00         | .17358366+01           | .40422118+00           | .11758452+01           | .59783104+00    |
| .47254786+00         | .17360696+01           | .40225701+00           | .11838915+01           | .60517616+00    |
| .47472952+00         | .17363159+01           | .40029979+00           | .11921489+01           | .61268125+00    |
| .47647485+00         | .17365227+01           | .39873851+00           | .11989127+01           | .61880492+00    |
| .47822018+00         | .17367379+01           | .39718083+00           | .12058223+01           | .62503886+00    |
| .47996551+00         | .17369617+01           | .39562635+00           | .12128830+01           | .63138686+00    |
| .48171084+00         | .17371941+01           | .39407470+00           | .12201000+01           | .63785281+00    |
| .48345616+00         | .17374350+01           | .39252548+00           | .12274795+01           | .64444106+00    |
| .48520149+00         | .17376847+01           | .39097831+00           | .12350273+01           | .65115593+00    |
| .48694682+00         | .17379430+01           | .38943277+00           | .12427498+01           | .65800206+00    |
| .48869215+00         | .17382100+01           | .38788847+00           | .12506540+01           | .66498443+00    |
| .49000115+00         | .17384161+01           | .38673081+00           | .12567056+01           | .67031373+00    |
| .49131014+00         | .17386272+01           | .38557342+00           | .12628668+01           | .67572491+00    |
| .49261914+00         | .17388433+01           | .38441613+00           | .12691407+01           | .68122036+00    |
| .49392813+00         | .17390644+01           | .38325875+00           | .12755309+01           | .68680255+00    |
| .49523713+00         | .17392907+01           | .38210110+00           | .12820410+01           | .69247412+00    |
| .49654613+00         | .17395221+01           | .38094297+00           | .12886749+01           | .69823790+00    |
| .49785511+00         | .17397591+01           | .37978421+00           | .12954364+01           | .70409651+00    |
| .49916408+00         | .17400015+01           | .37862460+00           | .13023298+01           | .71005312+00    |
| .50003672+00         | .17401661+01           | .37785093+00           | .13070009+01           | .71408017+00    |
| .50090919+00         | .17403330+01           | .37707653+00           | .13117330+01           | .71815230+00    |
| .50178165+00         | .17405024+01           | .37630153+00           | .13165284+01           | .72227132+00    |
| .50265411+00         | .17406742+01           | .37552585+00           | .13213886+01           | .72643831+00    |
| .50352658+00         | .17408483+01           | .37474944+00           | .13263152+01           | .73065435+00    |
| .50439904+00         | .17410250+01           | .37397221+00           | .13313097+01           | .73492048+00    |
| .50527150+00         | .17412042+01           | .37319411+00           | .13363736+01           | .73923789+00    |

TABLE 189. (Concluded)

$$M_{\text{ub}} = .12500000+02$$

$$\Theta_s = .43633230+00$$

| <u>O</u>     | <u>M*</u><br><u>1</u> | <u><math>\psi_1</math></u> | <u>X</u>     | <u>r</u>     |
|--------------|-----------------------|----------------------------|--------------|--------------|
| .50614396+00 | .17413859+01          | .37241507+00               | .13415086+01 | .74360767+00 |
| .50658020+00 | .17414777+01          | .37202516+00               | .13441033+01 | .74581264+00 |
| .50701643+00 | .17415701+01          | .37163499+00               | .13467165+01 | .74803118+00 |
| .50745266+00 | .17416632+01          | .37124455+00               | .13493483+01 | .75026345+00 |
| .50788889+00 | .17417569+01          | .37085382+00               | .13519990+01 | .75250956+00 |
| .50832512+00 | .17418513+01          | .37046280+00               | .13546688+01 | .75476979+00 |
| .50876135+00 | .17419463+01          | .37007148+00               | .13573581+01 | .75704426+00 |
| .50919759+00 | .17420420+01          | .36967984+00               | .13600668+01 | .75933306+00 |
| .50963382+00 | .17421383+01          | .36928788+00               | .13627954+01 | .76163644+00 |
| .51007005+00 | .17422354+01          | .36889558+00               | .13655442+01 | .76395463+00 |
| .51050628+00 | .17423330+01          | .36850295+00               | .13683133+01 | .76628774+00 |
| .51094251+00 | .17424314+01          | .36810996+00               | .13711031+01 | .76863596+00 |
| .51137874+00 | .17425304+01          | .36771661+00               | .13739137+01 | .77099945+00 |
| .51181497+00 | .17426301+01          | .36732289+00               | .13767454+01 | .77337846+00 |
| .51225121+00 | .17427305+01          | .36692879+00               | .13795986+01 | .77577312+00 |
| .51268744+00 | .17428315+01          | .36653430+00               | .13824734+01 | .77818368+00 |
| .51312367+00 | .17429333+01          | .36613940+00               | .13853704+01 | .78061036+00 |
| .51355990+00 | .17430358+01          | .36574408+00               | .13882895+01 | .78305329+00 |
| .51399613+00 | .17431390+01          | .36534832+00               | .13912313+01 | .78551274+00 |
| .51443236+00 | .17432429+01          | .36495213+00               | .13941960+01 | .78798895+00 |
| .51486859+00 | .17433474+01          | .36455548+00               | .13971838+01 | .79048204+00 |
| .51530483+00 | .17434528+01          | .36415837+00               | .14001952+01 | .79299230+00 |
| .51559588+00 | .17435234+01          | .36389316+00               | .14022176+01 | .79467677+00 |

$$.25067764+01 = \Delta S/R$$

$$.51406712+02 = P_s/P_\infty$$

$$.39003775+01 = \rho_s/\rho_\infty$$

$$.13179933+02 = T_s/T_\infty$$

TABLE 190. CONICAL FLOWFIELD  $\theta_s = 25.0^\circ$  DEG;  $M_\infty = 15.0$

| $\underline{u}_s$    | $\underline{M}_\infty$ | $\underline{\theta}_s$ | $\underline{\theta}_w$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .87032427+00         | .15000025+02           | .43633230+00           | .51339190+00           |                 |
| $\underline{\theta}$ | $\underline{M}_1^*$    | $\underline{\psi}_1$   | $\underline{x}$        | $\underline{r}$ |
| .43633230+00         | .17406159+01           | .43633230+00           | .10722535+01           | .50000000+00    |
| .43851396+00         | .17406241+01           | .43416068+00           | .10779903+01           | .50554123+00    |
| .44069562+00         | .17406486+01           | .43200847+00           | .10838505+01           | .51117708+00    |
| .44287728+00         | .17406889+01           | .42987470+00           | .10898383+01           | .51691062+00    |
| .44505894+00         | .17407448+01           | .42775844+00           | .10959579+01           | .52274507+00    |
| .44724060+00         | .17408159+01           | .42565879+00           | .11022139+01           | .52868386+00    |
| .44942226+00         | .17409020+01           | .42357486+00           | .11086112+01           | .53473052+00    |
| .45160392+00         | .17410028+01           | .42150579+00           | .11151546+01           | .54088878+00    |
| .45378558+00         | .17411181+01           | .41945076+00           | .11218497+01           | .54716261+00    |
| .45596724+00         | .17412478+01           | .41740893+00           | .11287020+01           | .55355617+00    |
| .45814890+00         | .17413916+01           | .41537951+00           | .11357174+01           | .56007380+00    |
| .46033056+00         | .17415494+01           | .41336172+00           | .11429021+01           | .56672006+00    |
| .46207589+00         | .17416857+01           | .41175532+00           | .11487763+01           | .57213300+00    |
| .46382122+00         | .17418307+01           | .41015547+00           | .11547667+01           | .57763399+00    |
| .46556655+00         | .17419845+01           | .40856177+00           | .11608770+01           | .58322573+00    |
| .46731188+00         | .17421471+01           | .40697384+00           | .11671112+01           | .58891117+00    |
| .46905721+00         | .17423183+01           | .40539128+00           | .11734733+01           | .59469328+00    |
| .47080253+00         | .17424981+01           | .40381372+00           | .11799677+01           | .60057512+00    |
| .47254786+00         | .17426866+01           | .40224075+00           | .11865987+01           | .60656000+00    |
| .47429319+00         | .17428837+01           | .40067200+00           | .11933713+01           | .61265142+00    |
| .47603852+00         | .17430895+01           | .39910707+00           | .12002905+01           | .61885295+00    |
| .47778385+00         | .17433039+01           | .39754557+00           | .12073613+01           | .62516841+00    |
| .47952918+00         | .17435269+01           | .39598710+00           | .12145894+01           | .63160173+00    |
| .48083817+00         | .17436998+01           | .39482001+00           | .12201173+01           | .63650668+00    |
| .48214717+00         | .17438777+01           | .39365423+00           | .12257394+01           | .64148216+00    |
| .48345616+00         | .17440605+01           | .39248959+00           | .12314586+01           | .64653012+00    |
| .48476516+00         | .17442481+01           | .39132591+00           | .12372776+01           | .65165264+00    |
| .48607416+00         | .17444408+01           | .39016303+00           | .12431994+01           | .65685172+00    |
| .48738315+00         | .17446384+01           | .38900076+00           | .12492270+01           | .66212962+00    |
| .48869215+00         | .17448411+01           | .38783891+00           | .12553635+01           | .66748855+00    |
| .49000115+00         | .17450487+01           | .38667731+00           | .12616124+01           | .67293093+00    |
| .49131014+00         | .17452615+01           | .38551576+00           | .12679770+01           | .67845925+00    |
| .49261914+00         | .17454793+01           | .38435408+00           | .12744611+01           | .68407612+00    |
| .49392813+00         | .17457024+01           | .38319207+00           | .12810684+01           | .68978417+00    |
| .49480080+00         | .17458539+01           | .38241711+00           | .12855437+01           | .69364166+00    |
| .49567346+00         | .17460080+01           | .38164187+00           | .12900767+01           | .69754180+00    |
| .49654610+00         | .17461646+01           | .38086629+00           | .12946688+01           | .70148551+00    |
| .49741875+00         | .17463235+01           | .38009029+00           | .12993212+01           | .70547369+00    |
| .49829140+00         | .17464849+01           | .37931380+00           | .13040353+01           | .70950738+00    |
| .49916405+00         | .17466486+01           | .37853677+00           | .13088125+01           | .71358755+00    |

TABLE 190. (Concluded)

$$M_{\infty} = .15000025+02$$

$$\Theta_s = .43633230+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .50003669+00 | .17468148+01 | .37775911+00 | .13136541+01 | .71771511+00 |
| .50090916+00 | .17469834+01 | .37698059+00 | .13185609+01 | .72189040+00 |
| .50178162+00 | .17471545+01 | .37620132+00 | .13235351+01 | .72611529+00 |
| .50265408+00 | .17473280+01 | .37542122+00 | .13285786+01 | .73039097+00 |
| .50352655+00 | .17475041+01 | .37464023+00 | .13336928+01 | .73471855+00 |
| .50396278+00 | .17475930+01 | .37424938+00 | .13362771+01 | .73690221+00 |
| .50439901+00 | .17476827+01 | .37385827+00 | .13388797+01 | .73909929+00 |
| .50483524+00 | .17477729+01 | .37346691+00 | .13415009+01 | .74130997+00 |
| .50527147+00 | .17478638+01 | .37307527+00 | .13441408+01 | .74353437+00 |
| .50570770+00 | .17479554+01 | .37268336+00 | .13467998+01 | .74577274+00 |
| .50614394+00 | .17480475+01 | .37229116+00 | .13494781+01 | .74802516+00 |
| .50658017+00 | .17481404+01 | .37189866+00 | .13521758+01 | .75029184+00 |
| .50701640+00 | .17482339+01 | .37150584+00 | .13548934+01 | .75257295+00 |
| .50745263+00 | .17483280+01 | .37111271+00 | .13576309+01 | .75486869+00 |
| .50788886+00 | .17484229+01 | .37071925+00 | .13603888+01 | .75717919+00 |
| .50832509+00 | .17485184+01 | .37032545+00 | .13631671+01 | .75950464+00 |
| .50876132+00 | .17486146+01 | .36993130+00 | .13659662+01 | .76184525+00 |
| .50919756+00 | .17487114+01 | .36953679+00 | .13687863+01 | .76420116+00 |
| .50963379+00 | .17488090+01 | .36914190+00 | .13716278+01 | .76657261+00 |
| .51007002+00 | .17489072+01 | .36874663+00 | .13744909+01 | .76895982+00 |
| .51050625+00 | .17490061+01 | .36835098+00 | .13773759+01 | .77136293+00 |
| .51094248+00 | .17491057+01 | .36795490+00 | .13802831+01 | .77378219+00 |
| .51137871+00 | .17492059+01 | .36755843+00 | .13832127+01 | .77621777+00 |
| .51181494+00 | .17493070+01 | .36716153+00 | .13861652+01 | .77866990+00 |
| .51225118+00 | .17494087+01 | .36676418+00 | .13891407+01 | .78113878+00 |
| .51268741+00 | .17495111+01 | .36636639+00 | .13921397+01 | .78362466+00 |
| .51312364+00 | .17496142+01 | .36596813+00 | .13951623+01 | .78612775+00 |
| .51339190+00 | .17496780+01 | .36572299+00 | .13970330+01 | .78767565+00 |

$$.29888744+01 = \Delta S/R$$

$$.73431670+02 = P_s/P_{\infty}$$

$$.39835603+01 = \rho_s/\rho_{\infty}$$

$$.18433679+02 = T_s/T_{\infty}$$



TABLE 191. CONICAL FLOWFIELD  $\theta_s = 25.0^\circ$  DEG;  $M_\infty = 17.5$

| $\underline{u_s}$    | $\underline{M_\infty}$ | $\underline{\theta_s}$ | $\underline{\theta_w}$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .87233172+00         | .17499973+02           | .43633230+00           | .51205975+00           |                 |
| $\underline{\theta}$ | $\underline{M_1^*}$    | $\underline{\psi_1}$   | $\underline{x}$        | $\underline{r}$ |
| .43633230+00         | .17446307+01           | .43633230+00           | .10722535+01           | .50000000+00    |
| .43851396+00         | .17446390+01           | .43416068+00           | .10780644+01           | .50557596+00    |
| .44069562+00         | .17446635+01           | .43200845+00           | .10840015+01           | .51124827+00    |
| .44287728+00         | .17447039+01           | .42987464+00           | .10900690+01           | .51702005+00    |
| .44505894+00         | .17447599+01           | .42775829+00           | .10962714+01           | .52289461+00    |
| .44724060+00         | .17448311+01           | .42565849+00           | .11026135+01           | .52887552+00    |
| .44942226+00         | .17449174+01           | .42357435+00           | .11091002+01           | .53496639+00    |
| .45160392+00         | .17450185+01           | .42150499+00           | .11157366+01           | .54117104+00    |
| .45378558+00         | .17451341+01           | .41944956+00           | .11225283+01           | .54749361+00    |
| .45596724+00         | .17452641+01           | .41740724+00           | .11294812+01           | .55393834+00    |
| .45814890+00         | .17454083+01           | .41537721+00           | .11366013+01           | .56050970+00    |
| .46033056+00         | .17455666+01           | .41335866+00           | .11438953+01           | .56721256+00    |
| .46207589+00         | .17457032+01           | .41175156+00           | .11498603+01           | .57267283+00    |
| .46382122+00         | .17458487+01           | .41015092+00           | .11559445+01           | .57822313+00    |
| .46556655+00         | .17460029+01           | .40855631+00           | .11621519+01           | .58386625+00    |
| .46731188+00         | .17461659+01           | .40696735+00           | .11684867+01           | .58960526+00    |
| .46905721+00         | .17463377+01           | .40538365+00           | .11749530+01           | .59544315+00    |
| .47080253+00         | .17465181+01           | .40380481+00           | .11815553+01           | .60138321+00    |
| .47254786+00         | .17467072+01           | .40223043+00           | .11882984+01           | .60742885+00    |
| .47429319+00         | .17469050+01           | .40066011+00           | .11951873+01           | .61358368+00    |
| .47603852+00         | .17471115+01           | .39909347+00           | .12022270+01           | .61985139+00    |
| .47778385+00         | .17473267+01           | .39753010+00           | .12094231+01           | .62623599+00    |
| .47952918+00         | .17475506+01           | .39596959+00           | .12167814+01           | .63274160+00    |
| .48083817+00         | .17477242+01           | .39480084+00           | .1224103+01            | .63770291+00    |
| .48214717+00         | .17479028+01           | .39363329+00           | .12281366+01           | .64273672+00    |
| .48345616+00         | .17480863+01           | .39246678+00           | .12339630+01           | .64784501+00    |
| .48476516+00         | .17482748+01           | .39130111+00           | .12398927+01           | .65302995+00    |
| .48607416+00         | .17484683+01           | .39013612+00           | .12459285+01           | .65829366+00    |
| .48738315+00         | .17486668+01           | .38897160+00           | .12520737+01           | .66363846+00    |
| .48869215+00         | .17488704+01           | .38780739+00           | .12583317+01           | .66906677+00    |
| .49000115+00         | .17490790+01           | .38664328+00           | .12647060+01           | .67458102+00    |
| .49131014+00         | .17492929+01           | .38547908+00           | .12712002+01           | .68018387+00    |
| .49261914+00         | .17495118+01           | .38431459+00           | .12778181+01           | .68587802+00    |
| .49392813+00         | .17497360+01           | .38314961+00           | .12845639+01           | .69166628+00    |
| .49480079+00         | .17498886+01           | .38237261+00           | .12891341+01           | .69557890+00    |
| .49567344+00         | .17500437+01           | .38159524+00           | .12937642+01           | .69953555+00    |
| .49654609+00         | .17502012+01           | .38081744+00           | .12984556+01           | .70353725+00    |
| .49741874+00         | .17503610+01           | .38003914+00           | .13032097+01           | .70758494+00    |
| .49829139+00         | .17505233+01           | .37926027+00           | .13080278+01           | .71167963+00    |
| .49916404+00         | .17506880+01           | .37848077+00           | .13129116+01           | .71582241+00    |

TABLE 191. (Concluded)

$$M_{\infty} = .17499973+02$$

$$\Theta_s = .43633230+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .50003668+00 | .17508552+01 | .37770054+00 | .13178625+01 | .72001430+00 |
| .50090914+00 | .17510248+01 | .37691937+00 | .13228811+01 | .72425562+00 |
| .50178161+00 | .17511970+01 | .37613735+00 | .13279698+01 | .72854824+00 |
| .50265407+00 | .17513717+01 | .37535442+00 | .13331307+01 | .73289350+00 |
| .50352653+00 | .17515489+01 | .37457050+00 | .13383655+01 | .73729264+00 |
| .50396276+00 | .17516384+01 | .37417813+00 | .13410111+01 | .73951276+00 |
| .50439899+00 | .17517287+01 | .37378550+00 | .13436758+01 | .74174684+00 |
| .50483523+00 | .17518196+01 | .37339257+00 | .13463598+01 | .74399500+00 |
| .50527146+00 | .17519111+01 | .37299936+00 | .13490635+01 | .74625746+00 |
| .50570769+00 | .17520033+01 | .37260582+00 | .13517871+01 | .74853435+00 |
| .50614392+00 | .17520961+01 | .37221198+00 | .13545308+01 | .75082589+00 |
| .50658015+00 | .17521896+01 | .37181780+00 | .13572948+01 | .75313222+00 |
| .50701638+00 | .17522838+01 | .37142329+00 | .13600795+01 | .75545355+00 |
| .50745261+00 | .17523786+01 | .37102842+00 | .13628850+01 | .75779004+00 |
| .50788885+00 | .17524742+01 | .37063320+00 | .13657118+01 | .76014190+00 |
| .50832508+00 | .17525704+01 | .37023761+00 | .13685600+01 | .76250932+00 |
| .50876131+00 | .17526673+01 | .36984164+00 | .13714299+01 | .76489252+00 |
| .50919754+00 | .17527649+01 | .36944527+00 | .13743218+01 | .76729161+00 |
| .50963377+00 | .17528632+01 | .36904849+00 | .13772361+01 | .76970691+00 |
| .51007000+00 | .17529622+01 | .36865131+00 | .13801730+01 | .77213863+00 |
| .51050624+00 | .17530619+01 | .36825369+00 | .13831327+01 | .77458683+00 |
| .51094247+00 | .17531623+01 | .36785564+00 | .13861156+01 | .77705187+00 |
| .51137870+00 | .17532634+01 | .36745714+00 | .13891222+01 | .77953392+00 |
| .51181493+00 | .17533652+01 | .36705819+00 | .13921525+01 | .78203322+00 |
| .51205975+00 | .17534227+01 | .36666340+00 | .13938638+01 | .78344351+00 |

$$.34111269+01 = \Delta S/R$$

$$.99459888+02 = P_s/P_{\infty}$$

$$.40362085+01 = \rho_s/\rho_{\infty}$$

$$.24641911+02 = T_s/T_{\infty}$$

TABLE 192. CONICAL FLOWFIELD  $\theta_s = 25.0$  DEG;  $M_\infty = 20.0$

| $\underline{u_s}$    | $\underline{M_\infty}$ | $\underline{\theta_s}$ | $\underline{\theta_w}$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .87364084+00         | .19999982+02           | .43633230+00           | .51119379+00           |                 |
| $\underline{\theta}$ | $\underline{M_1^*}$    | $\underline{\psi_1}$   | $\underline{x}$        | $\underline{r}$ |
| .43633230+00         | .17472489+01           | .43633230+00           | .10722535+01           | .50000000+00    |
| .43851396+00         | .17472572+01           | .43416067+00           | .10781137+01           | .50559907+00    |
| .44069562+00         | .17472618+01           | .43200843+00           | .10841018+01           | .51129559+00    |
| .44287728+00         | .17473222+01           | .42987459+00           | .10902223+01           | .51709277+00    |
| .44505894+00         | .17473783+01           | .42775819+00           | .10964798+01           | .52299399+00    |
| .44724060+00         | .17474497+01           | .42565829+00           | .11028789+01           | .52900282+00    |
| .44942226+00         | .17475361+01           | .42357400+00           | .11094250+01           | .53512307+00    |
| .45160392+00         | .17476373+01           | .42150445+00           | .11161233+01           | .54135863+00    |
| .45378558+00         | .17477532+01           | .41944876+00           | .11229794+01           | .54771359+00    |
| .45596724+00         | .17478834+01           | .41740611+00           | .11299992+01           | .55419236+00    |
| .45814890+00         | .17480278+01           | .41537566+00           | .11371891+01           | .56079956+00    |
| .46033056+00         | .17481863+01           | .41335662+00           | .11445559+01           | .56754008+00    |
| .46207589+00         | .17483232+01           | .41174905+00           | .11505812+01           | .57303187+00    |
| .46382122+00         | .17484689+01           | .41014786+00           | .11567280+01           | .57861502+00    |
| .46556655+00         | .17486235+01           | .40855264+00           | .11630002+01           | .58429242+00    |
| .46731188+00         | .17487868+01           | .40696300+00           | .11694020+01           | .59006710+00    |
| .46905721+00         | .17489589+01           | .40537853+00           | .11759378+01           | .59594225+00    |
| .47080253+00         | .17491397+01           | .40379883+00           | .11826123+01           | .60192115+00    |
| .47254786+00         | .17493293+01           | .40222351+00           | .11894301+01           | .60800733+00    |
| .47429319+00         | .17495275+01           | .40065215+00           | .11963965+01           | .61420448+00    |
| .47603852+00         | .17497345+01           | .39908436+00           | .12035169+01           | .62051646+00    |
| .47778385+00         | .17499502+01           | .39751973+00           | .12107969+01           | .62694732+00    |
| .47952918+00         | .17501746+01           | .39595784+00           | .12182425+01           | .63350136+00    |
| .48083817+00         | .17503487+01           | .39478798+00           | .12239390+01           | .63850041+00    |
| .48214717+00         | .17505277+01           | .39361925+00           | .12297350+01           | .64357323+00    |
| .48345616+00         | .17507118+01           | .39245148+00           | .12356334+01           | .64872194+00    |
| .48476516+00         | .17509008+01           | .39128447+00           | .12416371+01           | .65394872+00    |
| .48607416+00         | .17510948+01           | .39011805+00           | .12477495+01           | .65925579+00    |
| .48738315+00         | .17512940+01           | .38895203+00           | .12539737+01           | .66464551+00    |
| .48869215+00         | .17514982+01           | .38778622+00           | .12603132+01           | .67012033+00    |
| .49000115+00         | .17517075+01           | .38662042+00           | .12667714+01           | .67568284+00    |
| .49131014+00         | .17519220+01           | .38545443+00           | .12733528+01           | .68133570+00    |
| .49261914+00         | .17521417+01           | .38428805+00           | .12800608+01           | .68708175+00    |
| .49392813+00         | .17523669+01           | .38312110+00           | .12868995+01           | .69292387+00    |
| .49480078+00         | .17525201+01           | .38234271+00           | .12915334+01           | .69687350+00    |
| .49567343+00         | .17526758+01           | .38156391+00           | .12962289+01           | .70086818+00    |
| .49654607+00         | .17528338+01           | .38078461+00           | .13009871+01           | .70490887+00    |
| .49741872+00         | .17529943+01           | .38000475+00           | .13058097+01           | .70899660+00    |
| .49829137+00         | .17531572+01           | .37922428+00           | .13106980+01           | .71313241+00    |
| .49916402+00         | .17533226+01           | .37844310+00           | .13156536+01           | .71731736+00    |

TABLE 192. (Concluded)

| $M_{\infty} = .19999982+02$ |              |              | $\Theta_s = .43633230+00$ |              |
|-----------------------------|--------------|--------------|---------------------------|--------------|
| $\Theta$                    | $M_1^*$      | $\psi_1$     | $x$                       | $r$          |
| .50003666+00                | .17534904+01 | .37766116+00 | .13206781+01              | .72155257+00 |
| .50090913+00                | .17536608+01 | .37687820+00 | .13257720+01              | .72583832+00 |
| .50178159+00                | .17538336+01 | .37609433+00 | .13309381+01              | .73017667+00 |
| .50265405+00                | .17540091+01 | .37530949+00 | .13361783+01              | .73456887+00 |
| .50352652+00                | .17541871+01 | .37452357+00 | .13414943+01              | .73901622+00 |
| .50396275+00                | .17542771+01 | .37413019+00 | .13441813+01              | .74126100+00 |
| .50439898+00                | .17543677+01 | .37373652+00 | .13468880+01              | .74352004+00 |
| .50483521+00                | .17544590+01 | .37334253+00 | .13496146+01              | .74579354+00 |
| .50527144+00                | .17545509+01 | .37294824+00 | .13523614+01              | .74808168+00 |
| .50570767+00                | .17546436+01 | .37255362+00 | .13551286+01              | .75038464+00 |
| .50614391+00                | .17547368+01 | .37215865+00 | .13579165+01              | .75270257+00 |
| .50658014+00                | .17548308+01 | .37176335+00 | .13607254+01              | .75503574+00 |
| .50701637+00                | .17549255+01 | .37136769+00 | .13635554+01              | .75738424+00 |
| .50745260+00                | .17550208+01 | .37097165+00 | .13664070+01              | .75974829+00 |
| .50788883+00                | .17551168+01 | .37057523+00 | .13692804+01              | .76212814+00 |
| .50832506+00                | .17552135+01 | .37017843+00 | .13721759+01              | .76452397+00 |
| .50876129+00                | .17553109+01 | .36978123+00 | .13750937+01              | .76693591+00 |
| .50919753+00                | .17554089+01 | .36938360+00 | .13780343+01              | .76936433+00 |
| .50963376+00                | .17555077+01 | .36898555+00 | .13809978+01              | .77180924+00 |
| .51006999+00                | .17556073+01 | .36858706+00 | .13839846+01              | .77427103+00 |
| .51050622+00                | .17557075+01 | .36818812+00 | .13869950+01              | .77674977+00 |
| .51094245+00                | .17558084+01 | .36778872+00 | .13900294+01              | .77924585+00 |
| .51119379+00                | .17558669+01 | .36755840+00 | .13917886+01              | .78069191+00 |

$$.37851838+01 = \Delta S/R$$

$$.12949314+03 = P_s/P_{\infty}$$

$$.40714511+01 = \rho_s/\rho_{\infty}$$

$$.31805159+02 = T_s/T_{\infty}$$

/ TABLE 193. CONICAL FLOWFIELD  $\theta_s = 25.0$  DEG;  $M_\infty = 22.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .87454124+00 | .22499974+02 | .43633230+00 | .51059949+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .43633230+00 | .17490497+01 | .43633230+00 | .10722535+01 | .50000000+00 |
| .43851396+00 | .17490580+01 | .43416067+00 | .10781479+01 | .50561511+00 |
| .44067562+00 | .17490826+01 | .43200843+00 | .10841716+01 | .51132848+00 |
| .44287728+00 | .17491231+01 | .42987456+00 | .10903290+01 | .51714334+00 |
| .44505894+00 | .17491791+01 | .42775812+00 | .10966247+01 | .52306314+00 |
| .44724060+00 | .17492506+01 | .42565815+00 | .11030638+01 | .52909150+00 |
| .44942226+00 | .17493371+01 | .42357377+00 | .11096513+01 | .53523220+00 |
| .45160392+00 | .17494385+01 | .42150407+00 | .11163926+01 | .54148922+00 |
| .45378558+00 | .17495544+01 | .41944820+00 | .11232934+01 | .54786677+00 |
| .45596724+00 | .17496848+01 | .41740531+00 | .11303600+01 | .55436931+00 |
| .45814890+00 | .17498294+01 | .41537458+00 | .11375985+01 | .56100147+00 |
| .46033056+00 | .17499882+01 | .41335519+00 | .11450160+01 | .56776827+00 |
| .46207589+00 | .17501252+01 | .41174729+00 | .11510836+01 | .57328209+00 |
| .46382122+00 | .17502711+01 | .41014572+00 | .11572741+01 | .57888821+00 |
| .46556655+00 | .17504259+01 | .40855008+00 | .11635915+01 | .58458950+00 |
| .46731188+00 | .17505894+01 | .40695995+00 | .11700403+01 | .59038917+00 |
| .46905721+00 | .17507618+01 | .40537494+00 | .11766247+01 | .59629034+00 |
| .47080253+00 | .17509429+01 | .40379465+00 | .11833495+01 | .60229640+00 |
| .47254786+00 | .17511327+01 | .40221866+00 | .11902197+01 | .60841095+00 |
| .47429319+00 | .17513313+01 | .40064657+00 | .11972405+01 | .61463778+00 |
| .47603852+00 | .17515386+01 | .39907797+00 | .12044173+01 | .62098069+00 |
| .47778385+00 | .17517546+01 | .39751246+00 | .12117559+01 | .62744389+00 |
| .47952918+00 | .17519794+01 | .39594961+00 | .12192623+01 | .63403170+00 |
| .48083817+00 | .17521538+01 | .39477897+00 | .12250062+01 | .63905711+00 |
| .48214717+00 | .17523332+01 | .39360941+00 | .12308510+01 | .64415728+00 |
| .48345616+00 | .17525176+01 | .39244075+00 | .12367997+01 | .64933427+00 |
| .48476516+00 | .17527070+01 | .39127281+00 | .12428553+01 | .65459032+00 |
| .48607416+00 | .17529015+01 | .39010539+00 | .12490212+01 | .65992772+00 |
| .48738315+00 | .17531010+01 | .38893831+00 | .12553008+01 | .66534892+00 |
| .48869215+00 | .17533056+01 | .38777138+00 | .12616974+01 | .67085633+00 |
| .49000115+00 | .17535154+01 | .38660439+00 | .12682149+01 | .67645264+00 |
| .49131014+00 | .17537304+01 | .38543715+00 | .12748572+01 | .68214063+00 |
| .49261914+00 | .17539506+01 | .38426944+00 | .12816282+01 | .68792308+00 |
| .49392812+00 | .17541765+01 | .38310110+00 | .12885322+01 | .69380300+00 |
| .49480077+00 | .17543301+01 | .38232173+00 | .12932111+01 | .69777869+00 |
| .49567342+00 | .17544862+01 | .38154191+00 | .12979524+01 | .70180009+00 |
| .49654607+00 | .17546447+01 | .38076156+00 | .13027577+01 | .70586820+00 |
| .49741872+00 | .17548056+01 | .37998061+00 | .13076283+01 | .70998401+00 |
| .49829137+00 | .17549689+01 | .37919900+00 | .13125659+01 | .71414869+00 |
| .49916402+00 | .17551347+01 | .37841666+00 | .13175720+01 | .71836331+00 |



TABLE 193. (Concluded)

$$M_{\infty} = .22499974+02$$

$$\Theta_s = .43633230+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .50003666+00 | .17553031+01 | .37763350+00 | .13226482+01 | .72262897+00 |
| .50090912+00 | .17554739+01 | .37684929+00 | .13277952+01 | .72694598+00 |
| .50178158+00 | .17556473+01 | .37606412+00 | .13330158+01 | .73131649+00 |
| .50265405+00 | .17558232+01 | .37527792+00 | .13383117+01 | .73574170+00 |
| .50352651+00 | .17560018+01 | .37449061+00 | .13436849+01 | .74022304+00 |
| .50396274+00 | .17560920+01 | .37409651+00 | .13464011+01 | .74248511+00 |
| .50439897+00 | .17561830+01 | .37370210+00 | .13491374+01 | .74476175+00 |
| .50483520+00 | .17562745+01 | .37330738+00 | .13518939+01 | .74705306+00 |
| .50527143+00 | .17563668+01 | .37291232+00 | .13546710+01 | .74935929+00 |
| .50570767+00 | .17564597+01 | .37251694+00 | .13574690+01 | .75168058+00 |
| .50614390+00 | .17565533+01 | .37212119+00 | .13602880+01 | .75401712+00 |
| .50658013+00 | .17566476+01 | .37172509+00 | .13631285+01 | .75636917+00 |
| .50701636+00 | .17567425+01 | .37132861+00 | .13659906+01 | .75873683+00 |
| .50745259+00 | .17568382+01 | .37093176+00 | .13688747+01 | .76112035+00 |
| .50788882+00 | .17569345+01 | .37053450+00 | .13717810+01 | .76351991+00 |
| .50832506+00 | .17570315+01 | .37013683+00 | .13747098+01 | .76593575+00 |
| .50876129+00 | .17571293+01 | .36973877+00 | .13776615+01 | .76836804+00 |
| .50919752+00 | .17572277+01 | .36934025+00 | .13806363+01 | .77081700+00 |
| .50963375+00 | .17573269+01 | .36894130+00 | .13836347+01 | .77328292+00 |
| .51006998+00 | .17574268+01 | .36854190+00 | .13866568+01 | .77576594+00 |
| .51050621+00 | .17575274+01 | .36814202+00 | .13897030+01 | .77826633+00 |
| .5109949+00  | .17575489+01 | .36805645+00 | .13903575+01 | .77880324+00 |

$$.41201234+01 = \Delta S/R$$

$$.16353049+03 = P_s/P_{\infty}$$

$$.40961180+01 = \rho_s/\rho_{\infty}$$

$$.39923288+02 = T_s/T_{\infty}$$

TABLE 194. CONICAL FLOWFIELD  $\theta_s = 25.0$  DEG;  $M_\infty = 25.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .87518678+00 | .24999921+02 | .43633230+00 | .51017410+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .43633230+00 | .17503407+01 | .43633230+00 | .10722535+01 | .50000000+00 |
| .43851396+00 | .17503490+01 | .43416067+00 | .10781726+01 | .50562670+00 |
| .44069562+00 | .17503736+01 | .43200842+00 | .10842219+01 | .51135224+00 |
| .44287728+00 | .17504142+01 | .42987454+00 | .10904060+01 | .51717988+00 |
| .44505894+00 | .17504703+01 | .42775806+00 | .10967294+01 | .52311308+00 |
| .44724060+00 | .17505419+01 | .42565805+00 | .11031973+01 | .52915554+00 |
| .44942226+00 | .17506284+01 | .42357359+00 | .11098147+01 | .53531105+00 |
| .45160392+00 | .17507299+01 | .42150380+00 | .11165872+01 | .54158362+00 |
| .45378558+00 | .17508459+01 | .41944780+00 | .11235205+01 | .54797753+00 |
| .45596724+00 | .17509764+01 | .41740474+00 | .11306209+01 | .55449729+00 |
| .45814890+00 | .17511211+01 | .41537380+00 | .11378947+01 | .56114754+00 |
| .46033056+00 | .17512800+01 | .41335415+00 | .11453490+01 | .56793337+00 |
| .46207589+00 | .17514172+01 | .41174601+00 | .11514470+01 | .57346310+00 |
| .46382122+00 | .17515632+01 | .41014417+00 | .11576691+01 | .57908582+00 |
| .46556655+00 | .17517181+01 | .40854822+00 | .11640194+01 | .58480445+00 |
| .46731188+00 | .17518819+01 | .40695775+00 | .11705020+01 | .59062217+00 |
| .46905721+00 | .17520544+01 | .40537235+00 | .11771217+01 | .59654219+00 |
| .47080253+00 | .17522357+01 | .40379161+00 | .11838830+01 | .60256795+00 |
| .47254786+00 | .17524257+01 | .40221514+00 | .11907912+01 | .60870307+00 |
| .47429319+00 | .17526244+01 | .40064252+00 | .11978513+01 | .61495133+00 |
| .47603852+00 | .17528320+01 | .39907334+00 | .12050690+01 | .62131669+00 |
| .47778385+00 | .17530483+01 | .39750718+00 | .12124501+01 | .62780333+00 |
| .47952918+00 | .17532734+01 | .39594363+00 | .12200008+01 | .63441572+00 |
| .48083817+00 | .17534481+01 | .39477242+00 | .12257791+01 | .63946034+00 |
| .48214717+00 | .17536277+01 | .39360226+00 | .12316594+01 | .64458034+00 |
| .48345616+00 | .17538123+01 | .39243295+00 | .12376446+01 | .64977786+00 |
| .48476516+00 | .17540020+01 | .39126433+00 | .12437380+01 | .65505522+00 |
| .48607416+00 | .17541967+01 | .39009619+00 | .12499429+01 | .66041467+00 |
| .48738315+00 | .17543965+01 | .38892834+00 | .12562626+01 | .66585869+00 |
| .48869215+00 | .17546015+01 | .38776059+00 | .12627007+01 | .67138978+00 |
| .49000115+00 | .17548116+01 | .38659274+00 | .12692612+01 | .67701073+00 |
| .49131014+00 | .17550270+01 | .38542458+00 | .12759478+01 | .68272419+00 |
| .49261914+00 | .17552476+01 | .38425591+00 | .12827647+01 | .68853314+00 |
| .49392812+00 | .17554738+01 | .38308654+00 | .12897164+01 | .69444060+00 |
| .49480077+00 | .17556278+01 | .38230647+00 | .12944278+01 | .69843519+00 |
| .49567342+00 | .17557841+01 | .38152590+00 | .12992025+01 | .70247602+00 |
| .49654607+00 | .17559428+01 | .38074479+00 | .13040419+01 | .70656402+00 |
| .49741872+00 | .17561041+01 | .37996304+00 | .13089476+01 | .71070036+00 |
| .49829137+00 | .17562677+01 | .37918061+00 | .13139211+01 | .71488605+00 |
| .49916402+00 | .17564339+01 | .37839741+00 | .13189640+01 | .71912225+00 |

TABLE 194. (Concluded)

$$M_{\infty} = .24999921+02$$

$$\Theta_s = .43633230+00$$

| $\Theta$     | $M^*_1$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .50003666+00 | .17566025+01 | .37761337+00 | .13240779+01 | .72341009+00 |
| .50090912+00 | .17567737+01 | .37682824+00 | .13292636+01 | .72774990+00 |
| .50178158+00 | .17569475+01 | .37604212+00 | .13345238+01 | .73214383+00 |
| .50265405+00 | .17571238+01 | .37525494+00 | .13398604+01 | .73659313+00 |
| .50352651+00 | .17573028+01 | .37446661+00 | .13452753+01 | .74109917+00 |
| .50396274+00 | .17573932+01 | .37407199+00 | .13480128+01 | .74337390+00 |
| .50439897+00 | .17574843+01 | .37367705+00 | .13507706+01 | .74566333+00 |
| .50483520+00 | .17575761+01 | .37328178+00 | .13535489+01 | .74796763+00 |
| .50527143+00 | .17576686+01 | .37288617+00 | .13563482+01 | .75028703+00 |
| .50570767+00 | .17577617+01 | .37249022+00 | .13591686+01 | .75262172+00 |
| .50614390+00 | .17578555+01 | .37209391+00 | .13620104+01 | .75497185+00 |
| .50658013+00 | .17579501+01 | .37169722+00 | .13648739+01 | .75733767+00 |
| .50701636+00 | .17580452+01 | .37130015+00 | .13677594+01 | .75971929+00 |
| .50745259+00 | .17581411+01 | .37090269+00 | .13706672+01 | .76211700+00 |
| .50788882+00 | .17582377+01 | .37050483+00 | .13735975+01 | .76453096+00 |
| .50832506+00 | .17583350+01 | .37010653+00 | .13765507+01 | .76696140+00 |
| .50876129+00 | .17584330+01 | .36970782+00 | .13795271+01 | .76940854+00 |
| .50919752+00 | .17585317+01 | .36930867+00 | .13825270+01 | .77187257+00 |
| .50963375+00 | .17586311+01 | .36890905+00 | .13855507+01 | .77435375+00 |
| .51006998+00 | .17587312+01 | .36850898+00 | .13885985+01 | .77685226+00 |
| .51017410+00 | .17587553+01 | .36841341+00 | .13893296+01 | .77745120+00 |

$$.44229218+01 = \Delta S/R$$

$$.20157121+03 = P_s/P_{\infty}$$

$$.41140180+01 = \rho_s/\rho_{\infty}$$

$$.48996192+02 = T_s/T_{\infty}$$

TABLE 195. CONICAL FLOWFIELD  $\theta_s = 25.0$  DEG;  $M_\infty = 27.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .87566517+00 | .27500067+02 | .43633230+00 | .50985917+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .43633230+00 | .17512975+01 | .43633230+00 | .10722535+01 | .50000000+00 |
| .43851396+00 | .17513058+01 | .43416067+00 | .10781910+01 | .50563536+00 |
| .44069562+00 | .17513304+01 | .43200841+00 | .10842595+01 | .51136997+00 |
| .44287728+00 | .17513710+01 | .42987452+00 | .10904635+01 | .51720714+00 |
| .44505894+00 | .17514271+01 | .42775802+00 | .10968076+01 | .52315037+00 |
| .44724060+00 | .17514987+01 | .42565798+00 | .11032970+01 | .52920333+00 |
| .44942226+00 | .17515853+01 | .42357346+00 | .11099367+01 | .53536988+00 |
| .45160392+00 | .17516868+01 | .42150359+00 | .11167324+01 | .54165408+00 |
| .45378558+00 | .17518030+01 | .41944749+00 | .11236900+01 | .54806019+00 |
| .45596724+00 | .17519335+01 | .41740431+00 | .11308156+01 | .55459276+00 |
| .45814890+00 | .17520784+01 | .41537321+00 | .11381158+01 | .56125654+00 |
| .46033056+00 | .17522373+01 | .41335337+00 | .11455974+01 | .56805657+00 |
| .46207589+00 | .17523746+01 | .41174506+00 | .11517184+01 | .57359827+00 |
| .46382122+00 | .17525207+01 | .41014301+00 | .11579641+01 | .57923337+00 |
| .46556655+00 | .17526757+01 | .40854682+00 | .11643388+01 | .58496492+00 |
| .46731188+00 | .17528396+01 | .40695609+00 | .11708469+01 | .59079618+00 |
| .46905721+00 | .17530122+01 | .40537040+00 | .11774929+01 | .59673030+00 |
| .47080253+00 | .17531937+01 | .40378934+00 | .11843816+01 | .60277079+00 |
| .47254786+00 | .17533838+01 | .40221250+00 | .11912180+01 | .60892128+00 |
| .47429319+00 | .17535828+01 | .40063948+00 | .11983077+01 | .61518562+00 |
| .47603852+00 | .17537905+01 | .39906986+00 | .12055559+01 | .62156776+00 |
| .47778385+00 | .17540070+01 | .39750322+00 | .12129688+01 | .62807196+00 |
| .47952918+00 | .17542323+01 | .39593915+00 | .12205527+01 | .63470271+00 |
| .48083817+00 | .17544071+01 | .39476751+00 | .12263566+01 | .63976162+00 |
| .48214717+00 | .17545869+01 | .39359690+00 | .12322634+01 | .64489647+00 |
| .48345616+00 | .17547718+01 | .39242711+00 | .12382760+01 | .65010938+00 |
| .48476516+00 | .17549616+01 | .39125798+00 | .12443977+01 | .65540266+00 |
| .48607416+00 | .17551566+01 | .39008929+00 | .12506317+01 | .66077863+00 |
| .48738315+00 | .17553566+01 | .38892087+00 | .12569814+01 | .66623972+00 |
| .48869215+00 | .17555618+01 | .38775251+00 | .12634507+01 | .67178858+00 |
| .49000115+00 | .17557722+01 | .38658401+00 | .12700434+01 | .67742795+00 |
| .49131014+00 | .17559878+01 | .38541517+00 | .12767633+01 | .68316056+00 |
| .49261914+00 | .17562086+01 | .38424577+00 | .12836147+01 | .68898936+00 |
| .49392811+00 | .17564354+01 | .38307566+00 | .12906019+01 | .69491738+00 |
| .49480076+00 | .17565895+01 | .38229505+00 | .12953378+01 | .69892619+00 |
| .49567341+00 | .17567461+01 | .38151392+00 | .13001375+01 | .70298157+00 |
| .49654606+00 | .17569050+01 | .38073223+00 | .13050026+01 | .70708457+00 |
| .49741871+00 | .17570665+01 | .37994990+00 | .13099346+01 | .71123624+00 |
| .49829136+00 | .17572304+01 | .37916685+00 | .13149350+01 | .71543767+00 |
| .49916401+00 | .17573968+01 | .37838300+00 | .13200054+01 | .71969002+00 |

TABLE 195. (Concluded)

$$M_{\infty} = .27500067+02$$

$$\Theta_s = .43633230+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $\underline{x}$ | $\underline{r}$ |
|--------------|--------------|--------------|-----------------|-----------------|
| .50003665+00 | .17575657+01 | .37759830+00 | .13251475+01    | .72399444+00    |
| .50090911+00 | .17577372+01 | .37681248+00 | .13303622+01    | .72835136+00    |
| .50178158+00 | .17579112+01 | .37602565+00 | .13356522+01    | .73276286+00    |
| .50265404+00 | .17580878+01 | .37523773+00 | .13410192+01    | .73723018+00    |
| .50352650+00 | .17582670+01 | .37444863+00 | .13464655+01    | .74175479+00    |
| .50396273+00 | .17583576+01 | .37405361+00 | .13492189+01    | .74403901+00    |
| .50439896+00 | .17584489+01 | .37365828+00 | .13519929+01    | .74633805+00    |
| .50483520+00 | .17585409+01 | .37326261+00 | .13547876+01    | .74865211+00    |
| .50527143+00 | .17586335+01 | .37286659+00 | .13576035+01    | .75098144+00    |
| .50570766+00 | .17587268+01 | .37247021+00 | .13604407+01    | .75332615+00    |
| .50614389+00 | .17588208+01 | .37207346+00 | .13632996+01    | .75568648+00    |
| .50658012+00 | .17589155+01 | .37167634+00 | .13661804+01    | .75806259+00    |
| .50701635+00 | .17590108+01 | .37127883+00 | .13690835+01    | .76045474+00    |
| .50745258+00 | .17591069+01 | .37088092+00 | .13720090+01    | .76286308+00    |
| .50788882+00 | .17592036+01 | .37048259+00 | .13749574+01    | .76528785+00    |
| .50832505+00 | .17593011+01 | .37008383+00 | .13779288+01    | .76772924+00    |
| .50876128+00 | .17593993+01 | .36968464+00 | .13809237+01    | .77018747+00    |
| .50919751+00 | .17594981+01 | .36928499+00 | .13839424+01    | .77266282+00    |
| .50963374+00 | .17595978+01 | .36888489+00 | .13869852+01    | .77515543+00    |
| .50985917+00 | .17596495+01 | .36867794+00 | .13885672+01    | .77645045+00    |

$$.46989843+01 = \Delta S/R$$

$$.24361983+03 = P_s/P_{\infty}$$

$$.41274068+01 = \rho_s/\rho_{\infty}$$

$$.59024914+02 = T_s/T_{\infty}$$



TABLE 196. CONICAL FLOWFIELD  $\theta_s = 25.0$  DEG;  $M_\infty = 30.0$

| $\underline{u_s}$    | $\underline{M_\infty}$ | $\underline{\theta_s}$ | $\underline{\theta_w}$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .87602947+00         | .30000117+02           | .43633230+00           | .50961956+00           |                 |
| $\underline{\theta}$ | $\underline{M_1^*}$    | $\underline{\psi_1}$   | $\underline{x}$        | $\underline{r}$ |
| .43633230+00         | .17520261+01           | .43633230+00           | .10722535+01           | .50000000+00    |
| .43851396+00         | .17520344+01           | .43416067+00           | .10782052+01           | .50564198+00    |
| .44069562+00         | .17520590+01           | .43200841+00           | .10842883+01           | .51138353+00    |
| .44287728+00         | .17520996+01           | .42987451+00           | .10905074+01           | .51722797+00    |
| .44505894+00         | .17521558+01           | .42775799+00           | .10968673+01           | .52317885+00    |
| .44724060+00         | .17522274+01           | .42565792+00           | .11033731+01           | .52923985+00    |
| .44942226+00         | .17523140+01           | .42357336+00           | .11100299+01           | .53541485+00    |
| .45160392+00         | .17524156+01           | .42150344+00           | .11168435+01           | .54170793+00    |
| .45378558+00         | .17525318+01           | .41944726+00           | .11238196+01           | .54812339+00    |
| .45596724+00         | .17526624+01           | .41740398+00           | .11309644+01           | .55466576+00    |
| .45814890+00         | .17528073+01           | .41537276+00           | .11382847+01           | .56133984+00    |
| .46033056+00         | .17529664+01           | .41335277+00           | .11457874+01           | .56815074+00    |
| .46207589+00         | .17531037+01           | .41174432+00           | .11519257+01           | .57370149+00    |
| .46382122+00         | .17532499+01           | .41014212+00           | .11581896+01           | .57934615+00    |
| .46556655+00         | .17534050+01           | .40854576+00           | .11645830+01           | .58508765+00    |
| .46731188+00         | .17535689+01           | .40695482+00           | .11711105+01           | .59092920+00    |
| .46905721+00         | .17537417+01           | .40536890+00           | .11777766+01           | .59687412+00    |
| .47080253+00         | .17539232+01           | .40378759+00           | .11845863+01           | .60292587+00    |
| .47254786+00         | .17541135+01           | .40221049+00           | .11915444+01           | .60908812+00    |
| .47429319+00         | .17543126+01           | .40063716+00           | .11986566+01           | .61536475+00    |
| .47603852+00         | .17545205+01           | .39906720+00           | .12059283+01           | .62175974+00    |
| .47778385+00         | .17547371+01           | .39750019+00           | .12133656+01           | .62827741+00    |
| .47952918+00         | .17549626+01           | .39593571+00           | .12209748+01           | .63492222+00    |
| .48083817+00         | .17551375+01           | .39476376+00           | .12267986+01           | .63999217+00    |
| .48214717+00         | .17553174+01           | .39359279+00           | .12327257+01           | .64513840+00    |
| .48345616+00         | .17555024+01           | .39242264+00           | .12387592+01           | .65036307+00    |
| .48476516+00         | .17556925+01           | .39125311+00           | .12449026+01           | .65566857+00    |
| .48607416+00         | .17558876+01           | .39008401+00           | .12511589+01           | .66105718+00    |
| .48738315+00         | .17560878+01           | .38891514+00           | .12575319+01           | .66653146+00    |
| .48869215+00         | .17562931+01           | .38774631+00           | .12640249+01           | .67209391+00    |
| .49000115+00         | .17565037+01           | .38657732+00           | .12706422+01           | .67774737+00    |
| .49131014+00         | .17567195+01           | .38540795+00           | .12773877+01           | .68349465+00    |
| .49261914+00         | .17569406+01           | .38423800+00           | .12842655+01           | .68933871+00    |
| .49392811+00         | .17571676+01           | .38306729+00           | .12912800+01           | .69528252+00    |
| .49480076+00         | .17573219+01           | .38228627+00           | .12960346+01           | .69930221+00    |
| .49567341+00         | .17574786+01           | .38150473+00           | .13008536+01           | .70336872+00    |
| .49654606+00         | .17576378+01           | .38072259+00           | .13057384+01           | .70748320+00    |
| .49741871+00         | .17577993+01           | .37993980+00           | .13106905+01           | .71164665+00    |
| .49829136+00         | .17579634+01           | .37915427+00           | .13157115+01           | .71586017+00    |
| .49916401+00         | .17581300+01           | .37837194+00           | .13208032+01           | .72012499+00    |

TABLE 196. (Concluded)

$$M_{\infty} = .30000117+02$$

$$\Theta_s = .43633230+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $\underline{x}$ | $\underline{r}$ |
|--------------|--------------|--------------|-----------------|-----------------|
| .50003665+00 | .17582991+01 | .37758672+00 | .13259670+01    | .72444218+00    |
| .50090911+00 | .17584708+01 | .37680037+00 | .13312040+01    | .72881223+00    |
| .50178158+00 | .17586450+01 | .37601300+00 | .13365168+01    | .73323721+00    |
| .50265404+00 | .17588219+01 | .37522451+00 | .13419073+01    | .73771840+00    |
| .50352650+00 | .17590013+01 | .37443482+00 | .13473776+01    | .74225728+00    |
| .50396273+00 | .17590921+01 | .37403951+00 | .13501434+01    | .74454881+00    |
| .50439896+00 | .17591835+01 | .37364386+00 | .13529298+01    | .74685524+00    |
| .50483520+00 | .17592755+01 | .37324788+00 | .13557371+01    | .74917680+00    |
| .50527143+00 | .17593683+01 | .37285154+00 | .13585658+01    | .75151373+00    |
| .50570766+00 | .17594617+01 | .37245484+00 | .13614159+01    | .75386614+00    |
| .50614389+00 | .17595558+01 | .37205777+00 | .13642879+01    | .75623429+00    |
| .50658012+00 | .17596506+01 | .37166031+00 | .13671820+01    | .75861832+00    |
| .50701635+00 | .17597461+01 | .37126245+00 | .13700984+01    | .76101850+00    |
| .50745258+00 | .17598423+01 | .37086419+00 | .13730376+01    | .76343502+00    |
| .50788882+00 | .17599392+01 | .37046550+00 | .13759999+01    | .76586810+00    |
| .50832505+00 | .17600368+01 | .37006639+00 | .13789854+01    | .76831792+00    |
| .50876128+00 | .17601351+01 | .36966683+00 | .13819946+01    | .77078473+00    |
| .50919751+00 | .17602342+01 | .36926681+00 | .13850278+01    | .77326877+00    |
| .50961956+00 | .17603307+01 | .36887935+00 | .13879854+01    | .77568860+00    |

$$.49524692+01 = \Delta S/R$$

$$.28967131+03 = P_s/P_{\infty}$$

$$.41376706+01 = \rho_s/\rho_{\infty}$$

$$.70008308+02 = T_s/T_{\infty}$$

TABLE 197. CONICAL FLOWFIELD  $\theta_s = 27.5 \text{ DEG}$ ;  $M_\infty = 1.6858701$

| $\underline{u_s}$    | $\underline{M_\infty}$ | $\underline{\theta_s}$ | $\underline{\theta_w}$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .50000938+00         | .16858701+01           | .47996553+00           | .94121914+00           |                 |
| $\underline{\theta}$ | $\underline{M_1^*}$    | $\underline{\psi_1}$   | $\underline{x}$        | $\underline{r}$ |
| .47996553+00         | .10000000+01           | .47996553+00           | .96049106+00           | .50000000+00    |
| .49392616+00         | .10001868+01           | .46636592+00           | .95375033+00           | .51354161+00    |
| .50789072+00         | .10007163+01           | .45344909+00           | .94746912+00           | .52735442+00    |
| .52185322+00         | .10015486+01           | .44115593+00           | .94161975+00           | .54145508+00    |
| .53581573+00         | .10026502+01           | .42943391+00           | .93617933+00           | .55586215+00    |
| .54977824+00         | .10039926+01           | .41823606+00           | .93112934+00           | .57059617+00    |
| .56374075+00         | .10055522+01           | .40752022+00           | .92645508+00           | .58567980+00    |
| .57770325+00         | .10073088+01           | .39724835+00           | .92214544+00           | .60113809+00    |
| .58992045+00         | .10089940+01           | .38859743+00           | .91866706+00           | .61499286+00    |
| .60213764+00         | .10108072+01           | .38023888+00           | .91545796+00           | .62917553+00    |
| .61435483+00         | .10127403+01           | .37215320+00           | .91251635+00           | .64370801+00    |
| .62657203+00         | .10147861+01           | .36432234+00           | .90984201+00           | .65861414+00    |
| .63878922+00         | .10169386+01           | .35672949+00           | .90743645+00           | .67391996+00    |
| .65100642+00         | .10191928+01           | .34935907+00           | .90530282+00           | .68965392+00    |
| .66322361+00         | .10215447+01           | .34219639+00           | .90344588+00           | .70584708+00    |
| .67369549+00         | .10236357+01           | .33621188+00           | .90207957+00           | .72011828+00    |
| .68416737+00         | .10257944+01           | .33036178+00           | .90092693+00           | .73477552+00    |
| .69463925+00         | .10280195+01           | .32463825+00           | .89999454+00           | .74984444+00    |
| .70511113+00         | .10303101+01           | .31903382+00           | .89929008+00           | .76535292+00    |
| .71558301+00         | .10326658+01           | .31354138+00           | .89882288+00           | .78133167+00    |
| .72605489+00         | .10350865+01           | .30815408+00           | .89860359+00           | .79781426+00    |
| .73652677+00         | .10375723+01           | .30286519+00           | .89864350+00           | .81483661+00    |
| .74525334+00         | .10396940+01           | .29852831+00           | .89888626+00           | .82946461+00    |
| .75397991+00         | .10418618+01           | .29425166+00           | .89932898+00           | .84452217+00    |
| .76270647+00         | .10440766+01           | .29003160+00           | .89998218+00           | .86003749+00    |
| .77143304+00         | .10463392+01           | .28586457+00           | .90085756+00           | .87604133+00    |
| .78015961+00         | .10486508+01           | .28174709+00           | .90196840+00           | .89256753+00    |
| .78888617+00         | .10510127+01           | .27767563+00           | .90332963+00           | .90965335+00    |
| .79761274+00         | .10534265+01           | .27364662+00           | .90495802+00           | .92733988+00    |
| .80459400+00         | .10553962+01           | .27045161+00           | .90646566+00           | .94195193+00    |
| .81157525+00         | .10574013+01           | .26727960+00           | .90816706+00           | .95700293+00    |
| .81855650+00         | .10594430+01           | .26412875+00           | .91007426+00           | .97252087+00    |
| .82553776+00         | .10615228+01           | .26099715+00           | .91220049+00           | .98853629+00    |
| .83251901+00         | .10636420+01           | .25788284+00           | .91456027+00           | .10050824+01    |
| .83950026+00         | .10658024+01           | .25478372+00           | .91716996+00           | .10221962+01    |
| .84648152+00         | .10680057+01           | .25169776+00           | .92004777+00           | .10399182+01    |
| .85171746+00         | .10696876+01           | .24939057+00           | .92239419+00           | .10536355+01    |
| .85695340+00         | .10713957+01           | .24708857+00           | .92491222+00           | .10677408+01    |
| .86218934+00         | .10731312+01           | .24479071+00           | .92761223+00           | .10822565+01    |
| .86742528+00         | .10748950+01           | .24249598+00           | .93050556+00           | .10972070+01    |

TABLE 197. (Concluded)

| $M_{\infty} = .16858701+01$ |                     |                      | $\Theta_s = .47996553+00$ |                 |
|-----------------------------|---------------------|----------------------|---------------------------|-----------------|
| $\underline{\Theta}$        | $\underline{M_1^*}$ | $\underline{\psi_1}$ | $\underline{x}$           | $\underline{r}$ |
| .87266122+00                | .10766885+01        | .24020328+00         | .93360467+00              | .11126190+01    |
| .87789716+00                | .10785129+01        | .23791140+00         | .93692315+00              | .11285215+01    |
| .88313310+00                | .10803696+01        | .23561915+00         | .94047607+00              | .11449461+01    |
| .88662373+00                | .10816262+01        | .23409013+00         | .94298314+00              | .11562032+01    |
| .89011435+00                | .10828984+01        | .23255996+00         | .94560708+00              | .11677190+01    |
| .89360498+00                | .10841867+01        | .23102819+00         | .94835369+00              | .11795054+01    |
| .89709561+00                | .10854917+01        | .22949441+00         | .95122919+00              | .11915753+01    |
| .90058623+00                | .10868140+01        | .22795812+00         | .95424022+00              | .12039425+01    |
| .90407686+00                | .10881543+01        | .22641885+00         | .95739400+00              | .12166215+01    |
| .90756749+00                | .10895132+01        | .22487607+00         | .96069829+00              | .12296283+01    |
| .90931280+00                | .10901999+01        | .22410318+00         | .96240944+00              | .12362598+01    |
| .91105811+00                | .10908916+01        | .22332921+00         | .96416140+00              | .12429797+01    |
| .91280343+00                | .10915882+01        | .22255406+00         | .96595535+00              | .12497904+01    |
| .91454874+00                | .10922901+01        | .22177768+00         | .96779247+00              | .12566943+01    |
| .91629405+00                | .10929972+01        | .22099999+00         | .96967404+00              | .12636939+01    |
| .91803937+00                | .10937097+01        | .22022090+00         | .97160134+00              | .12707917+01    |
| .91978439+00                | .10944277+01        | .21944038+00         | .97357541+00              | .12779894+01    |
| .92152932+00                | .10951514+01        | .21865829+00         | .97559793+00              | .12852907+01    |
| .92327424+00                | .10958808+01        | .21787453+00         | .97767048+00              | .12926988+01    |
| .92501917+00                | .10966160+01        | .21708903+00         | .97979461+00              | .13002169+01    |
| .92676409+00                | .10973573+01        | .21630169+00         | .98197196+00              | .13078482+01    |
| .92850902+00                | .10981048+01        | .21551237+00         | .98420425+00              | .13155961+01    |
| .93025395+00                | .10988586+01        | .21472100+00         | .98649327+00              | .13234642+01    |
| .93199887+00                | .10996188+01        | .21392746+00         | .98884086+00              | .13314560+01    |
| .93374380+00                | .11003857+01        | .21313164+00         | .99124905+00              | .13395756+01    |
| .93548872+00                | .11011594+01        | .21233345+00         | .99371988+00              | .13478270+01    |
| .93723365+00                | .11019400+01        | .21153271+00         | .99625555+00              | .13562144+01    |
| .93897858+00                | .11027278+01        | .21072932+00         | .99885830+00              | .13647423+01    |
| .94072350+00                | .11035230+01        | .20992317+00         | .10015306+01              | .13734154+01    |
| .94121914+00                | .11037503+01        | .20969366+00         | .10023026+01              | .13759061+01    |

$$.30125082+01 = \Delta S/R$$

$$.25015002+01 = P_s/P_{\infty}$$

$$.17127033+01 = \rho_s/\rho_{\infty}$$

$$.14605567+01 = T_s/T_{\infty}$$

TABLE 198. CONICAL FLOWFIELD  $\theta_s = 27.5$  DEG;  $M_\infty = 2.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .57348540+00 | .19999992+01 | .47996553+00 | .82155880+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .47996553+00 | .11469493+01 | .47996553+00 | .96049106+00 | .50000000+00 |
| .49043750+00 | .11470712+01 | .46969865+00 | .96224207+00 | .51378939+00 |
| .50090946+00 | .11474214+01 | .45982080+00 | .96418141+00 | .52787385+00 |
| .51138134+00 | .11479798+01 | .45030259+00 | .96631913+00 | .54227284+00 |
| .52185322+00 | .11487288+01 | .44111753+00 | .96866643+00 | .55700761+00 |
| .53232510+00 | .11496534+01 | .43224145+00 | .97123523+00 | .57210084+00 |
| .54192433+00 | .11506441+01 | .42435760+00 | .97379576+00 | .58627219+00 |
| .55152355+00 | .11517626+01 | .41669916+00 | .97656438+00 | .60078575+00 |
| .56112278+00 | .11530014+01 | .40925159+00 | .97955296+00 | .61566346+00 |
| .57072200+00 | .11543538+01 | .40200134+00 | .98277456+00 | .63092911+00 |
| .58032122+00 | .11558141+01 | .39493575+00 | .98624343+00 | .64660844+00 |
| .58904779+00 | .11572311+01 | .38866270+00 | .98962452+00 | .66124476+00 |
| .59777436+00 | .11587301+01 | .38252401+00 | .99323569+00 | .67626877+00 |
| .60650092+00 | .11603083+01 | .37651171+00 | .99709103+00 | .69170517+00 |
| .61522749+00 | .11619634+01 | .37061806+00 | .10012058+01 | .70758066+00 |
| .62395406+00 | .11636937+01 | .36483585+00 | .10055968+01 | .72392435+00 |
| .63180797+00 | .11653140+01 | .35972123+00 | .10098003+01 | .73906016+00 |
| .63966188+00 | .11669932+01 | .35468622+00 | .10142574+01 | .75462613+00 |
| .64751579+00 | .11687306+01 | .34972593+00 | .10189845+01 | .77064973+00 |
| .65536970+00 | .11705262+01 | .34483569+00 | .10239993+01 | .78716069+00 |
| .66322361+00 | .11723797+01 | .34001088+00 | .10293217+01 | .80419175+00 |
| .67020486+00 | .11740761+01 | .33577345+00 | .10343283+01 | .81979587+00 |
| .67718612+00 | .11758188+01 | .33158095+00 | .10396118+01 | .83586650+00 |
| .68416737+00 | .11776082+01 | .32743024+00 | .10451904+01 | .85243353+00 |
| .69114862+00 | .11794451+01 | .32331822+00 | .10510844+01 | .86952955+00 |
| .69812988+00 | .11813301+01 | .31924167+00 | .10573162+01 | .88719033+00 |
| .70423847+00 | .11830199+01 | .31570134+00 | .10630653+01 | .90313759+00 |
| .71034707+00 | .11847482+01 | .31218358+00 | .10691101+01 | .91957612+00 |
| .71645567+00 | .11865160+01 | .30868615+00 | .10754704+01 | .93653735+00 |
| .72256427+00 | .11883243+01 | .30520685+00 | .10821682+01 | .95405562+00 |
| .72867286+00 | .11901745+01 | .30174332+00 | .10892276+01 | .97216872+00 |
| .73390880+00 | .11917946+01 | .29878530+00 | .10955869+01 | .98819912+00 |
| .73914474+00 | .11934475+01 | .29583555+00 | .11022500+01 | .10047256+01 |
| .74438068+00 | .11951343+01 | .29289242+00 | .11092375+01 | .10217795+01 |
| .74961662+00 | .11968561+01 | .28995419+00 | .11165720+01 | .10393952+01 |
| .75485256+00 | .11986143+01 | .28701909+00 | .11242779+01 | .10576101+01 |
| .75921585+00 | .12001085+01 | .28457419+00 | .11310030+01 | .10732767+01 |
| .76357913+00 | .12016300+01 | .28212901+00 | .11360223+01 | .10894141+01 |
| .76794241+00 | .12031798+01 | .27968235+00 | .11453551+01 | .11060511+01 |
| .77230570+00 | .12047592+01 | .27723291+00 | .11530219+01 | .11232186+01 |



TABLE 198. (Concluded) 11

$$M_{\infty} = .19999992+01$$

$$\Theta_s = .47996553+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .77666898+00 | .12063694+01 | .27477933+00 | .11610458+01 | .11409507+01 |
| .78015961+00 | .12076806+01 | .27281253+00 | .11677389+01 | .11555680+01 |
| .78365023+00 | .12090132+01 | .27084139+00 | .11746905+01 | .11705911+01 |
| .78714057+00 | .12103683+01 | .26886520+00 | .11819155+01 | .11860415+01 |
| .79063042+00 | .12117471+01 | .26688313+00 | .11894302+01 | .12019426+01 |
| .79412027+00 | .12131499+01 | .26489405+00 | .11972535+01 | .12183230+01 |
| .79673766+00 | .12142185+01 | .26339704+00 | .12033356+01 | .12309402+01 |
| .79935505+00 | .12153017+01 | .26189506+00 | .12096115+01 | .12438565+01 |
| .80197244+00 | .12164000+01 | .26038765+00 | .12160910+01 | .12570858+01 |
| .80458983+00 | .12175140+01 | .25887434+00 | .12227845+01 | .12706434+01 |
| .80720722+00 | .12186442+01 | .25735454+00 | .12297033+01 | .12845454+01 |
| .80895215+00 | .12194070+01 | .25633746+00 | .12344469+01 | .12940132+01 |
| .81069707+00 | .12201775+01 | .25531707+00 | .12392999+01 | .13036474+01 |
| .81244200+00 | .12209560+01 | .25429322+00 | .12442662+01 | .13134536+01 |
| .81418692+00 | .12217425+01 | .25326567+00 | .12493500+01 | .13234379+01 |
| .81593185+00 | .12225375+01 | .25223425+00 | .12545560+01 | .13336067+01 |
| .81767678+00 | .12233410+01 | .25119874+00 | .12598889+01 | .13439669+01 |
| .81942170+00 | .12241534+01 | .25015891+00 | .12653536+01 | .13545256+01 |
| .82116663+00 | .12249749+01 | .24911454+00 | .12709555+01 | .13652902+01 |
| .82155880+00 | .12251608+01 | .24887916+00 | .12722340+01 | .13677387+01 |

$$.54041684-01 = \Delta S/R$$

$$.29072298+01 = P_s/P_{\infty}$$

$$.18564950+01 = \rho_s/\rho_{\infty}$$

$$.15659778+01 = T_s/T_{\infty}$$

TABLE 199. CONICAL FLOWFIELD  $\theta_s = 27.5^\circ$  DEG;  $M_\infty = 2.5$

| $\underline{u}_s$    | $\underline{M}_\infty$ | $\underline{\theta}_s$ | $\underline{\theta}_w$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .65016533+00         | .24999952+01           | .47996553+00           | .72704583+00           |                 |
| $\underline{\theta}$ | $\underline{M}_1^*$    | $\underline{\psi}_1$   | $\underline{x}$        | $\underline{r}$ |
| .47996553+00         | .13003063+01           | .47996553+00           | .96049106+00           | .50000000+00    |
| .48694685+00         | .13003684+01           | .47307586+00           | .96441740+00           | .51063270+00    |
| .49392816+00         | .13005493+01           | .46636184+00           | .96851277+00           | .52149037+00    |
| .50090946+00         | .13008419+01           | .45981270+00           | .97278519+00           | .53258428+00    |
| .50789072+00         | .13012397+01           | .45341838+00           | .97724321+00           | .54392646+00    |
| .51443564+00         | .13017033+01           | .44755608+00           | .98159950+00           | .55479680+00    |
| .52098057+00         | .13022501+01           | .44181453+00           | .98613530+00           | .56590811+00    |
| .52752549+00         | .13028766+01           | .43618698+00           | .99085946+00           | .57727254+00    |
| .53407042+00         | .13035793+01           | .43066705+00           | .99578149+00           | .58890307+00    |
| .54017901+00         | .13043013+01           | .42560687+00           | .10005629+01           | .60001053+00    |
| .54628761+00         | .13050850+01           | .42063048+00           | .10055345+01           | .61137392+00    |
| .55239621+00         | .13059284+01           | .41573342+00           | .10107059+01           | .62300622+00    |
| .55850480+00         | .13068299+01           | .41091137+00           | .10160877+01           | .63492128+00    |
| .56417707+00         | .13077176+01           | .40649731+00           | .10212831+01           | .64625135+00    |
| .56984934+00         | .13086531+01           | .40214118+00           | .10266790+01           | .65785074+00    |
| .57552161+00         | .13096354+01           | .39783987+00           | .10322859+01           | .66973306+00    |
| .58119388+00         | .13106637+01           | .39359035+00           | .10381150+01           | .68191296+00    |
| .58642982+00         | .13116534+01           | .38971113+00           | .10437034+01           | .69343364+00    |
| .59166576+00         | .13126814+01           | .38587125+00           | .10495016+01           | .70523449+00    |
| .59690170+00         | .13137475+01           | .38206847+00           | .10555207+01           | .71732976+00    |
| .60213764+00         | .13148515+01           | .37830056+00           | .10617728+01           | .72973470+00    |
| .60693725+00         | .13158967+01           | .37487539+00           | .10677192+01           | .74139190+00    |
| .61173686+00         | .13169737+01           | .37147602+00           | .10738827+01           | .75333654+00    |
| .61653648+00         | .13180826+01           | .36810071+00           | .10802746+01           | .76550316+00    |
| .62133609+00         | .13192234+01           | .36474783+00           | .10869074+01           | .77614738+00    |
| .62569937+00         | .13202985+01           | .36171781+00           | .10931574+01           | .78785915+00    |
| .63006265+00         | .13213804+01           | .35870360+00           | .10996283+01           | .80186074+00    |
| .63442594+00         | .13224995+01           | .35570393+00           | .11063318+01           | .81416675+00    |
| .63878922+00         | .13236460+01           | .35271751+00           | .11132805+01           | .82679281+00    |
| .64271618+00         | .13247017+01           | .35003995+00           | .11197549+01           | .83844364+00    |
| .64664313+00         | .13257802+01           | .34737104+00           | .11264495+01           | .85038036+00    |
| .65057009+00         | .13268821+01           | .34470976+00           | .11333755+01           | .86261697+00    |
| .65449704+00         | .13280077+01           | .34205503+00           | .11405453+01           | .87516861+00    |
| .65798767+00         | .13290285+01           | .33969998+00           | .11471339+01           | .88660314+00    |
| .66147830+00         | .13300688+01           | .33734852+00           | .11539356+01           | .89831157+00    |
| .66496892+00         | .13311290+01           | .33499982+00           | .11609612+01           | .91030697+00    |
| .66845955+00         | .13322096+01           | .33265311+00           | .11682221+01           | .92260327+00    |
| .67151385+00         | .13331721+01           | .33060066+00           | .11747783+01           | .93362118+00    |
| .67456815+00         | .13341510+01           | .32854845+00           | .11815331+01           | .94489167+00    |
| .67762244+00         | .13351466+01           | .32649590+00           | .11884941+01           | .95642632+00    |

TABLE 199. (Concluded)

$$M_{\infty} = .24999952+01$$

$$\Theta_s = .47996553+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .68067674+00 | .13361593+01 | .32444234+00 | .11956776+01 | .96823731+00 |
| .68329471+00 | .13370414+01 | .32266086+00 | .12020152+01 | .97859085+00 |
| .68591268+00 | .13379366+01 | .32091769+00 | .12085287+01 | .98916581+00 |
| .68853065+00 | .13388454+01 | .31915239+00 | .12152259+01 | .99997152+00 |
| .69114843+00 | .13397684+01 | .31738452+00 | .12221147+01 | .10110171+01 |
| .69332959+00 | .13405489+01 | .31590886+00 | .12280076+01 | .10204119+01 |
| .69551075+00 | .13413396+01 | .31443077+00 | .12340456+01 | .10299876+01 |
| .69769190+00 | .13421406+01 | .31295006+00 | .12402345+01 | .10397511+01 |
| .69987306+00 | .13429522+01 | .31146631+00 | .12465803+01 | .10497096+01 |
| .70161799+00 | .13436093+01 | .31027685+00 | .12517744+01 | .10578220+01 |
| .70336291+00 | .13442735+01 | .30908506+00 | .12570767+01 | .10660682+01 |
| .70510784+00 | .13449450+01 | .30789071+00 | .12624908+01 | .10744525+01 |
| .70685276+00 | .13456241+01 | .30669362+00 | .12680207+01 | .10829798+01 |
| .70816146+00 | .13461382+01 | .30579386+00 | .12722466+01 | .10894716+01 |
| .70947015+00 | .13466568+01 | .30489240+00 | .12765416+01 | .10960486+01 |
| .71077885+00 | .13471798+01 | .30398909+00 | .12809078+01 | .11027128+01 |
| .71208754+00 | .13477074+01 | .30308384+00 | .12853469+01 | .11094664+01 |
| .71339624+00 | .13482395+01 | .30217660+00 | .12898611+01 | .11163120+01 |
| .71470493+00 | .13487763+01 | .30126719+00 | .12944525+01 | .11232518+01 |
| .71601363+00 | .13493179+01 | .30035563+00 | .12991232+01 | .11302885+01 |
| .71732232+00 | .13498644+01 | .29944171+00 | .13038755+01 | .11374247+01 |
| .71863101+00 | .13504158+01 | .29852537+00 | .13087119+01 | .11446632+01 |
| .71993971+00 | .13509723+01 | .29760648+00 | .13136349+01 | .11520068+01 |
| .72124840+00 | .13515340+01 | .29668491+00 | .13186469+01 | .11594586+01 |
| .72255710+00 | .13521010+01 | .29576056+00 | .13237508+01 | .11670216+01 |
| .72386579+00 | .13526734+01 | .29483331+00 | .13289493+01 | .11746992+01 |
| .72517449+00 | .13532513+01 | .29390302+00 | .13342455+01 | .11824947+01 |
| .72648318+00 | .13538348+01 | .29296956+00 | .13396425+01 | .11904117+01 |
| .72704583+00 | .13540875+01 | .29256720+00 | .13419946+01 | .11938537+01 |

$$.11838251+00 = \Delta S/R$$

$$.37551657+01 = P_s/P_{\infty}$$

$$.21096228+01 = \rho_s/\rho_{\infty}$$

$$.17800177+01 = T_s/T_{\infty}$$

TABLE 200. CONICAL FLOWFIELD  $\theta_s = 27.5 \text{ DEG}$ ;  $M_\infty = 3.0$

| $\underline{u_s}$    | $\underline{M_\infty}$ | $\underline{\theta_s}$ | $\underline{\theta_w}$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .70015280+00         | .29999964+01           | .47996553+00           | .67705638+00           |                 |
| $\underline{\theta}$ | $\underline{M_1^*}$    | $\underline{\psi_1}$   | $\underline{x}$        | $\underline{r}$ |
| .47996553+00         | .14002793+01           | .47996553+00           | .96049106+00           | .50000000+00    |
| .48607418+00         | .14003307+01           | .47392703+00           | .96558657+00           | .51017339+00    |
| .49218283+00         | .14004808+01           | .46802290+00           | .97087839+00           | .52058039+00    |
| .49829148+00         | .14007245+01           | .46224476+00           | .97637628+00           | .53123280+00    |
| .50440009+00         | .14010572+01           | .45658473+00           | .98209056+00           | .54214302+00    |
| .51050869+00         | .14014748+01           | .45103551+00           | .98803257+00           | .55332467+00    |
| .51661728+00         | .14019735+01           | .44559025+00           | .99421453+00           | .56479222+00    |
| .52272588+00         | .14025503+01           | .44024242+00           | .10006496+01           | .57656127+00    |
| .52883448+00         | .14032022+01           | .43498589+00           | .10073520+01           | .58864857+00    |
| .53407042+00         | .14038188+01           | .43054848+00           | .10133215+01           | .59927618+00    |
| .53930636+00         | .14044875+01           | .42617030+00           | .10195094+01           | .61016322+00    |
| .54454230+00         | .14052069+01           | .42184789+00           | .10259270+01           | .62132286+00    |
| .54977824+00         | .14059760+01           | .41757796+00           | .10325868+01           | .63276929+00    |
| .55501418+00         | .14067940+01           | .41335728+00           | .10395018+01           | .64451765+00    |
| .56025012+00         | .14076600+01           | .40918270+00           | .10466865+01           | .65658434+00    |
| .56548606+00         | .14085736+01           | .40505113+00           | .10541564+01           | .66898704+00    |
| .57072200+00         | .14095342+01           | .40095953+00           | .10619283+01           | .68174483+00    |
| .57508528+00         | .14103705+01           | .39757825+00           | .10686488+01           | .69266248+00    |
| .57944857+00         | .14112391+01           | .39422090+00           | .10756033+01           | .70385394+00    |
| .58381185+00         | .14121402+01           | .39088578+00           | .10828042+01           | .71533313+00    |
| .58817513+00         | .14130736+01           | .38757112+00           | .10902647+01           | .72711486+00    |
| .59253842+00         | .14140396+01           | .38427521+00           | .10979993+01           | .73921522+00    |
| .59690170+00         | .14150384+01           | .38099634+00           | .11060237+01           | .75165144+00    |
| .60126498+00         | .14160701+01           | .37773267+00           | .11143547+01           | .76444223+00    |
| .60562827+00         | .14171354+01           | .37448240+00           | .11230106+01           | .77760778+00    |
| .60911889+00         | .14180119+01           | .37189063+00           | .11301828+01           | .78842473+00    |
| .61260952+00         | .14189104+01           | .36930527+00           | .11375868+01           | .79950763+00    |
| .61610015+00         | .14198312+01           | .36672540+00           | .11452346+01           | .81086943+00    |
| .61959077+00         | .14207747+01           | .36414991+00           | .11531389+01           | .82252406+00    |
| .62308140+00         | .14217413+01           | .36157780+00           | .11613134+01           | .83448647+00    |
| .62657203+00         | .14227314+01           | .35900798+00           | .11697736+01           | .84677278+00    |
| .63006265+00         | .14237455+01           | .35643931+00           | .11785350+01           | .85940035+00    |
| .63355328+00         | .14247844+01           | .35387062+00           | .11876153+01           | .87238786+00    |
| .63617125+00         | .14255800+01           | .35194339+00           | .11946461+01           | .88237692+00    |
| .63878922+00         | .14263902+01           | .35001492+00           | .12018755+01           | .89258911+00    |
| .64140719+00         | .14272153+01           | .34808464+00           | .12093128+01           | .90303419+00    |
| .64402497+00         | .14280559+01           | .34615190+00           | .12169671+01           | .91372184+00    |
| .64664236+00         | .14289126+01           | .34421605+00           | .12248484+01           | .92466233+00    |
| .64925975+00         | .14297854+01           | .34227660+00           | .12329691+01           | .93586919+00    |
| .65187714+00         | .14306745+01           | .34033286+00           | .12413413+01           | .94735516+00    |

TABLE 200. (Concluded)

$$M_{\infty} = .29999964+01$$

$$\Theta_s = .47996553+00$$

| $\underline{\Theta}$ | $\underline{M_1^*}$ | $\underline{\psi_1}$ | $\underline{x}$ | $\underline{r}$ |
|----------------------|---------------------|----------------------|-----------------|-----------------|
| .65449452+00         | .14315806+01        | .33838411+00         | .12499780+01    | .95913401+00    |
| .65623945+00         | .14321942+01        | .33708181+00         | .12558896+01    | .96715648+00    |
| .65798438+00         | .14328158+01        | .33577676+00         | .12619294+01    | .97532026+00    |
| .65972930+00         | .14334454+01        | .33446866+00         | .12681020+01    | .98363028+00    |
| .66147423+00         | .14340832+01        | .33315733+00         | .12744124+01    | .99209157+00    |
| .66321915+00         | .14347295+01        | .33184247+00         | .12808657+01    | .10007096+01    |
| .66496408+00         | .14353844+01        | .33052383+00         | .12874673+01    | .10094901+01    |
| .66670901+00         | .14360482+01        | .32920113+00         | .12942231+01    | .10184390+01    |
| .66845393+00         | .14367210+01        | .32787410+00         | .13011392+01    | .10275626+01    |
| .66932639+00         | .14370609+01        | .32720881+00         | .13046593+01    | .10321921+01    |
| .67019886+00         | .14374031+01        | .32654238+00         | .13082220+01    | .10368679+01    |
| .67107132+00         | .14377477+01        | .32587466+00         | .13118282+01    | .10415908+01    |
| .67194378+00         | .14380948+01        | .32520568+00         | .13154785+01    | .10463617+01    |
| .67281625+00         | .14384443+01        | .32453538+00         | .13191741+01    | .10511817+01    |
| .67368871+00         | .14387962+01        | .32386368+00         | .13229157+01    | .10560516+01    |
| .67456117+00         | .14391508+01        | .32319058+00         | .13267046+01    | .10609726+01    |
| .67543364+00         | .14395078+01        | .32251602+00         | .13305416+01    | .10659456+01    |
| .67630610+00         | .14398675+01        | .32183993+00         | .13344279+01    | .10709719+01    |
| .67705638+00         | .14401789+01        | .32125733+00         | .13378101+01    | .10753376+01    |

$$.21152249+00 = \Delta S/R$$

$$.48058727+01 = P_s/P_{\infty}$$

$$.23567247+01 = \rho_s/\rho_{\infty}$$

$$.20392169+01 = T_s/T_{\infty}$$



TABLE 201. CONICAL FLOWFIELD  $\theta_s = 27.5 \text{ DEG}$ ;  $M_\infty = 4.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .75852939+00 | .40000360+01 | .47996553+00 | .62715304+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .47996553+00 | .15170303+01 | .47996553+00 | .96049106+00 | .50000000+00 |
| .48432885+00 | .15170589+01 | .47563809+00 | .96572370+00 | .50809179+00 |
| .48869218+00 | .15171429+01 | .47137973+00 | .97111587+00 | .51635145+00 |
| .49305550+00 | .15172803+01 | .46718660+00 | .97667442+00 | .52478606+00 |
| .49741882+00 | .15174692+01 | .46305504+00 | .98240674+00 | .53340330+00 |
| .50178212+00 | .15177079+01 | .45898157+00 | .98832050+00 | .54221113+00 |
| .50614540+00 | .15179948+01 | .45496289+00 | .99442412+00 | .55121818+00 |
| .51007236+00 | .15182931+01 | .45139030+00 | .10000871+01 | .55950242+00 |
| .51399931+00 | .15186284+01 | .44785734+00 | .10059180+01 | .56796255+00 |
| .51792627+00 | .15189999+01 | .44436183+00 | .10119241+01 | .57660604+00 |
| .52185322+00 | .15194069+01 | .44090171+00 | .10181135+01 | .58544093+00 |
| .52578018+00 | .15198487+01 | .43747495+00 | .10244945+01 | .59447573+00 |
| .52970713+00 | .15203247+01 | .43407959+00 | .10310761+01 | .60371947+00 |
| .53319776+00 | .15207762+01 | .43108627+00 | .10371026+01 | .61211937+00 |
| .53668839+00 | .15212541+01 | .42811490+00 | .10433024+01 | .62069920+00 |
| .54017901+00 | .15217582+01 | .42516416+00 | .10496832+01 | .62946666+00 |
| .54366964+00 | .15222882+01 | .42223273+00 | .10562532+01 | .63842988+00 |
| .54716027+00 | .15228440+01 | .41931934+00 | .10630210+01 | .64759752+00 |
| .55065089+00 | .15234255+01 | .41642268+00 | .10699962+01 | .65697888+00 |
| .55370519+00 | .15239553+01 | .41390082+00 | .10762773+01 | .66537056+00 |
| .55675949+00 | .15245048+01 | .41138994+00 | .10827318+01 | .67394038+00 |
| .55981379+00 | .15250739+01 | .40888915+00 | .10893673+01 | .68269577+00 |
| .56286809+00 | .15256627+01 | .40639760+00 | .10961920+01 | .69164472+00 |
| .56592239+00 | .15262713+01 | .40391438+00 | .11032143+01 | .70079555+00 |
| .56897669+00 | .15268998+01 | .40143862+00 | .11104437+01 | .71015731+00 |
| .57159466+00 | .15274545+01 | .39932178+00 | .11168123+01 | .71835676+00 |
| .57421263+00 | .15280240+01 | .39720917+00 | .11233468+01 | .72672448+00 |
| .57683060+00 | .15286085+01 | .39510021+00 | .11300540+01 | .73526732+00 |
| .57944857+00 | .15292080+01 | .39299423+00 | .11369415+01 | .74399245+00 |
| .58206654+00 | .15298229+01 | .39089069+00 | .11440172+01 | .75290748+00 |
| .58468451+00 | .15304532+01 | .38879896+00 | .11512893+01 | .76202047+00 |
| .58686615+00 | .15309905+01 | .38703834+00 | .11575041+01 | .76977204+00 |
| .58904779+00 | .15315388+01 | .38528816+00 | .11638711+01 | .77767237+00 |
| .59122943+00 | .15320982+01 | .38353795+00 | .11703901+01 | .78572700+00 |
| .59341107+00 | .15326691+01 | .38178734+00 | .11770694+01 | .79394184+00 |
| .59559271+00 | .15332515+01 | .38003591+00 | .11839155+01 | .80232313+00 |
| .59777436+00 | .15338456+01 | .37828320+00 | .11909353+01 | .81087739+00 |
| .59995194+00 | .15343298+01 | .37687967+00 | .11966805+01 | .81784925+00 |
| .60126440+00 | .15348221+01 | .37547480+00 | .12025448+01 | .82493921+00 |
| .60300933+00 | .15353222+01 | .37406829+00 | .12085331+01 | .83215209+00 |

TABLE 201. (Concluded)

| $M_{\infty} = .40000360+01$ |              | $\Theta_s = .47996553+00$ |              |              |
|-----------------------------|--------------|---------------------------|--------------|--------------|
| $\Theta$                    | $M_1^*$      | $\psi_1$                  | $x$          | $r$          |
| .60475425+00                | .15358304+01 | .37265994+00              | .12146498+01 | .83949193+00 |
| .60649918+00                | .15363467+01 | .37124951+00              | .12208995+01 | .84696318+00 |
| .60824411+00                | .15368713+01 | .36983670+00              | .12272871+01 | .85457036+00 |
| .60955280+00                | .15372703+01 | .36877535+00              | .12321714+01 | .86036786+00 |
| .61086150+00                | .15376741+01 | .36771239+00              | .12371384+01 | .86624670+00 |
| .61217019+00                | .15380928+01 | .36664770+00              | .12421904+01 | .87220906+00 |
| .61347888+00                | .15384964+01 | .36558111+00              | .12473301+01 | .87825731+00 |
| .61478758+00                | .15389151+01 | .36451254+00              | .12525598+01 | .88439376+00 |
| .61609627+00                | .15393390+01 | .36344180+00              | .12578824+01 | .89062098+00 |
| .61696874+00                | .15396244+01 | .36272673+00              | .12614837+01 | .89482421+00 |
| .61784120+00                | .15399122+01 | .36201061+00              | .12651283+01 | .89906967+00 |
| .61871366+00                | .15402024+01 | .36129336+00              | .12688172+01 | .90335829+00 |
| .61958613+00                | .15404949+01 | .36057495+00              | .12725513+01 | .90769092+00 |
| .62045859+00                | .15407900+01 | .35985537+00              | .12763315+01 | .91206846+00 |
| .62133105+00                | .15410874+01 | .35913455+00              | .12801587+01 | .91649168+00 |
| .62220351+00                | .15413873+01 | .35841242+00              | .12840340+01 | .92096161+00 |
| .62307598+00                | .15416898+01 | .35768894+00              | .12879585+01 | .92547920+00 |
| .62394844+00                | .15419946+01 | .35696410+00              | .12919330+01 | .93004543+00 |
| .62482090+00                | .15423024+01 | .35623780+00              | .12959589+01 | .93466128+00 |
| .62569337+00                | .15426127+01 | .35551000+00              | .13000371+01 | .93932787+00 |
| .62656583+00                | .15429256+01 | .35478064+00              | .13041690+01 | .94404624+00 |
| .62715304+00                | .15431377+01 | .35428888+00              | .13069807+01 | .94725163+00 |

$$.46007788+00 = \Delta S/R$$

$$.74874889+01 = P_s/P_{\infty}$$

$$.27839736+01 = \rho_s/\rho_{\infty}$$

$$.26894971+01 = T_s/T_{\infty}$$

TABLE 202. CONICAL FLOWFIELD  $\theta_s = 27.5 \text{ DEG}$ ;  $M_\infty = 5.0$

| $\frac{u}{s}$      | $\frac{M}{\infty}$ | $\frac{\theta}{s}$ | $\frac{\theta}{w}$ |               |
|--------------------|--------------------|--------------------|--------------------|---------------|
| .78937729+00       | .49999993+01       | .47996553+00       | .60373574+00       |               |
| $\frac{\theta}{s}$ | $\frac{M}{1}$      | $\frac{\psi}{1}$   | $\frac{x}{s}$      | $\frac{r}{s}$ |
| .47996553+00       | .15787250+01       | .47996553+00       | .96049106+00       | .50000000+00  |
| .48389252+00       | .15787491+01       | .47606759+00       | .96611428+00       | .50775918+00  |
| .48781951+00       | .15788201+01       | .47222551+00       | .97190438+00       | .51568328+00  |
| .49174650+00       | .15789366+01       | .46843606+00       | .97786867+00       | .52377933+00  |
| .49567349+00       | .15790970+01       | .46469617+00       | .98401479+00       | .53205478+00  |
| .49960048+00       | .15793000+01       | .46100293+00       | .99035105+00       | .54051760+00  |
| .50352743+00       | .15795445+01       | .45735350+00       | .99688611+00       | .54917610+00  |
| .50701806+00       | .15797958+01       | .45414419+00       | .10028697+01       | .55704427+00  |
| .51050869+00       | .15800784+01       | .45096555+00       | .10090250+01       | .56508099+00  |
| .51399931+00       | .15803918+01       | .44781581+00       | .10153594+01       | .57329340+00  |
| .51748994+00       | .15807353+01       | .44469327+00       | .10218811+01       | .58168913+00  |
| .52098057+00       | .15811086+01       | .44159620+00       | .10285985+01       | .59027626+00  |
| .52447119+00       | .15815113+01       | .43852296+00       | .10355210+01       | .59906345+00  |
| .52795254+00       | .15818875+01       | .43558521+00       | .10417539+01       | .60692350+00  |
| .53057979+00       | .15822858+01       | .43319722+00       | .10481582+01       | .61495031+00  |
| .53363409+00       | .15827060+01       | .43055713+00       | .10547412+01       | .62315072+00  |
| .53668839+00       | .15831480+01       | .42793081+00       | .10615110+01       | .63153217+00  |
| .53974269+00       | .15836118+01       | .42531719+00       | .10684760+01       | .64010250+00  |
| .54279698+00       | .15840973+01       | .42271520+00       | .10756452+01       | .64887004+00  |
| .54541495+00       | .15845307+01       | .42049337+00       | .10819599+01       | .65665469+00  |
| .54803292+00       | .15849801+01       | .41827862+00       | .10884381+01       | .66438476+00  |
| .55065089+00       | .15854456+01       | .41607026+00       | .10950866+01       | .67238442+00  |
| .55326886+00       | .15859271+01       | .41386760+00       | .11019127+01       | .68055438+00  |
| .55588683+00       | .15864248+01       | .41166994+00       | .11089242+01       | .68890175+00  |
| .55850480+00       | .15869389+01       | .40947656+00       | .11161291+01       | .69743401+00  |
| .56068645+00       | .15873797+01       | .40765148+00       | .11222874+01       | .70469119+00  |
| .56286809+00       | .15878321+01       | .40582844+00       | .11285915+01       | .71208727+00  |
| .56504973+00       | .15882961+01       | .40400070+00       | .11350472+01       | .71962735+00  |
| .56723137+00       | .15887718+01       | .40218671+00       | .11416605+01       | .72731689+00  |
| .56941301+00       | .15892593+01       | .40036712+00       | .11484376+01       | .73516163+00  |
| .57159466+00       | .15897589+01       | .39854773+00       | .11553853+01       | .74316770+00  |
| .57333997+00       | .15901673+01       | .39709206+00       | .11610712+01       | .74969306+00  |
| .57508528+00       | .15905836+01       | .39563597+00       | .11668748+01       | .75632927+00  |
| .57683060+00       | .15910078+01       | .39417919+00       | .11728801+01       | .76307998+00  |
| .57857591+00       | .15914401+01       | .39272144+00       | .11788851+01       | .76994905+00  |
| .58032084+00       | .15918813+01       | .39126226+00       | .11850318+01       | .77693898+00  |
| .58206576+00       | .15923308+01       | .38980156+00       | .11913475+01       | .78405550+00  |
| .58337446+00       | .15926735+01       | .38870488+00       | .11961760+01       | .78947864+00  |
| .58468315+00       | .15930209+01       | .38760705+00       | .12010855+01       | .79497745+00  |
| .58599184+00       | .15933732+01       | .38650790+00       | .12060784+01       | .80055398+00  |

TABLE 202. (Concluded)

| $M_{\infty} = .49999993+01$ $\Theta_S = .47996553+00$ |              |              |              |              |
|---|--------------|--------------|--------------|--------------|
| $\Theta$  | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .58730054+00  | .15937304+01 | .38540741+00 | .12111571+01 | .80621038+00 |
| .58860923+00  | .15940927+01 | .38430531+00 | .12163240+01 | .81194887+00 |
| .58991793+00  | .15944600+01 | .38320153+00 | .12215817+01 | .81777174+00 |
| .59079039+00  | .15947077+01 | .38246465+00 | .12251387+01 | .82170174+00 |
| .59166285+00  | .15949577+01 | .38172693+00 | .12287382+01 | .82567105+00 |
| .59253532+00  | .15952100+01 | .38098830+00 | .12323808+01 | .82968042+00 |
| .59340778+00  | .15954647+01 | .38024871+00 | .12360677+01 | .83373066+00 |
| .59428024+00  | .15957218+01 | .37950814+00 | .12397996+01 | .83782258+00 |
| .59515271+00  | .15959813+01 | .37876648+00 | .12435775+01 | .84195697+00 |
| .59558894+00  | .15961120+01 | .37839526+00 | .12454840+01 | .84404036+00 |
| .59602517+00  | .15962432+01 | .37802375+00 | .12474024+01 | .84613470+00 |
| .59646140+00  | .15963751+01 | .37765196+00 | .12493327+01 | .84824007+00 |
| .59689763+00  | .15965076+01 | .37727986+00 | .12512752+01 | .85035665+00 |
| .59733386+00  | .15966407+01 | .37690745+00 | .12532300+01 | .85248453+00 |
| .59777009+00  | .15967745+01 | .37653477+00 | .12551971+01 | .85462376+00 |
| .59820633+00  | .15969089+01 | .37616176+00 | .12571767+01 | .85677453+00 |
| .59864256+00  | .15970439+01 | .37578841+00 | .12591690+01 | .85893695+00 |
| .59907879+00  | .15971795+01 | .37541477+00 | .12611741+01 | .86111112+00 |
| .59951502+00  | .15973158+01 | .37504078+00 | .12631922+01 | .86329719+00 |
| .59995125+00  | .15974527+01 | .37466643+00 | .12652232+01 | .86549524+00 |
| .60038748+00  | .15975903+01 | .37429177+00 | .12672676+01 | .86770546+00 |
| .60082372+00  | .15977286+01 | .37391674+00 | .12693252+01 | .86992789+00 |
| .60125995+00  | .15978674+01 | .37354133+00 | .12713964+01 | .87216274+00 |
| .60169618+00  | .15980070+01 | .37316557+00 | .12734813+01 | .87441019+00 |
| .60213241+00  | .15981472+01 | .37278941+00 | .12755800+01 | .87667024+00 |
| .60256864+00  | .15982881+01 | .37241286+00 | .12776926+01 | .87894306+00 |
| .60300487+00  | .15984297+01 | .37203596+00 | .12798194+01 | .88122887+00 |
| .60344110+00  | .15985719+01 | .37165862+00 | .12819606+01 | .88352779+00 |
| .60373574+00  | .15986684+01 | .37140356+00 | .12834149+01 | .88508800+00 |

$$.75244606+00 = \Delta S/R$$

$$.10935377+02 = P_S/P_{\infty}$$

$$.31086412+01 = \rho_S/\rho_{\infty}$$

$$.35177354+01 = T_S/T_{\infty}$$

TABLE 203. CONICAL FLOWFIELD  $\theta_s = 27.5 \text{ DEG}$ ;  $M_\infty = 6.0$

| $\underline{u_s}$    | $\underline{M_\infty}$ | $\underline{\theta_s}$ | $\underline{\theta_w}$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .80737145+00         | .59999807+01           | .47996553+00           | .59087580+00           |                 |
| $\underline{\theta}$ | $\underline{M_1^*}$    | $\underline{\psi_1}$   | $\underline{x}$        | $\underline{r}$ |
| .47996553+00         | .16147126+01           | .47996553+00           | .96049106+00           | .50000000+00    |
| .48345619+00         | .16147321+01           | .47649784+00           | .96602431+00           | .50717408+00    |
| .48694685+00         | .16147897+01           | .47307435+00           | .97171115+00           | .51449455+00    |
| .49043750+00         | .16148843+01           | .46969259+00           | .97755794+00           | .52196731+00    |
| .49392816+00         | .16150148+01           | .46635017+00           | .98357142+00           | .52959862+00    |
| .49741882+00         | .16151802+01           | .46304481+00           | .98975872+00           | .53739510+00    |
| .50090946+00         | .16153798+01           | .45977432+00           | .99612744+00           | .54536379+00    |
| .50440009+00         | .16156128+01           | .45653656+00           | .10026858+01           | .55351219+00    |
| .50745439+00         | .16158434+01           | .45372879+00           | .10085867+01           | .56079573+00    |
| .51050869+00         | .16160987+01           | .45094319+00           | .10146456+01           | .56822868+00    |
| .51356298+00         | .16163783+01           | .44817849+00           | .10208692+01           | .57581701+00    |
| .51661728+00         | .16166818+01           | .44543337+00           | .10272642+01           | .58356705+00    |
| .51967158+00         | .16170090+01           | .44270658+00           | .10338384+01           | .59148564+00    |
| .52272588+00         | .16173597+01           | .43999691+00           | .10405996+01           | .59957993+00    |
| .52578018+00         | .16177337+01           | .43730309+00           | .10475561+01           | .60785750+00    |
| .52839815+00         | .16180726+01           | .43500581+00           | .10536811+01           | .61510451+00    |
| .53101612+00         | .16184285+01           | .43271852+00           | .10599623+01           | .62249757+00    |
| .53363409+00         | .16188013+01           | .43044046+00           | .10664061+01           | .63004240+00    |
| .53625206+00         | .16191909+01           | .42817086+00           | .10730193+01           | .63774510+00    |
| .53887003+00         | .16195975+01           | .42590895+00           | .10798090+01           | .64561206+00    |
| .54148800+00         | .16200209+01           | .42365395+00           | .10867829+01           | .65365004+00    |
| .54410597+00         | .16204613+01           | .42140508+00           | .10939492+01           | .66186634+00    |
| .54628761+00         | .16208413+01           | .41953513+00           | .11000743+01           | .66885499+00    |
| .54846925+00         | .16212332+01           | .41766841+00           | .11063443+01           | .67597752+00    |
| .55065089+00         | .16216370+01           | .41580446+00           | .11127650+01           | .68323898+00    |
| .55283254+00         | .16220529+01           | .41394278+00           | .11193421+01           | .69064450+00    |
| .55501418+00         | .16224809+01           | .41208290+00           | .11260821+01           | .69819967+00    |
| .55719582+00         | .16229212+01           | .41022430+00           | .11329916+01           | .70591038+00    |
| .55937746+00         | .16233739+01           | .40836646+00           | .11400778+01           | .71378288+00    |
| .56112278+00         | .16237450+01           | .40688040+00           | .11458788+01           | .72020172+00    |
| .56286809+00         | .16241243+01           | .40539422+00           | .11518018+01           | .72673185+00    |
| .56461340+00         | .16245117+01           | .40390762+00           | .11578510+01           | .73337703+00    |
| .56635872+00         | .16249075+01           | .40242033+00           | .11640309+01           | .74014115+00    |
| .56810393+00         | .16253118+01           | .40093199+00           | .11703460+01           | .74702805+00    |
| .56984886+00         | .16257252+01           | .39944219+00           | .11768005+01           | .75404117+00    |
| .57159378+00         | .16261471+01           | .39795076+00           | .11834006+01           | .76118625+00    |
| .57290248+00         | .16264693+01           | .39683093+00           | .11884497+01           | .76663459+00    |
| .57421117+00         | .16267965+01           | .39570988+00           | .11935864+01           | .77216200+00    |
| .57551987+00         | .16271288+01           | .39458741+00           | .11988132+01           | .77777074+00    |
| .57682856+00         | .16274661+01           | .39346340+00           | .12041329+01           | .78346398+00    |



TABLE 203. (concluded)

| $M_\infty = .59999807+01$ |              |              | $\Theta_s = .47996553+00$ |              |
|---------------------------|--------------|--------------|---------------------------|--------------|
| $\Theta$                  | $M_1^*$      | $\psi_1$     | $x$                       | $r$          |
| .57813726+00              | .16278087+01 | .39233772+00 | .12095481+01              | .78924149+00 |
| .57944595+00              | .16281566+01 | .39121017+00 | .12150619+01              | .79510839+00 |
| .58075465+00              | .16285097+01 | .39008059+00 | .12206774+01              | .80106654+00 |
| .58162711+00              | .16287482+01 | .38932633+00 | .12244791+01              | .80509070+00 |
| .58249957+00              | .16289891+01 | .38857108+00 | .12283284+01              | .80915742+00 |
| .58337203+00              | .16292324+01 | .38781474+00 | .12322262+01              | .81326755+00 |
| .58424450+00              | .16294783+01 | .38705721+00 | .12361737+01              | .81742214+00 |
| .58511696+00              | .16297266+01 | .38629857+00 | .12401719+01              | .82162193+00 |
| .58598942+00              | .16299776+01 | .38553865+00 | .12442220+01              | .82586803+00 |
| .58686189+00              | .16302310+01 | .38477744+00 | .12483250+01              | .83016136+00 |
| .58729812+00              | .16303588+01 | .38439635+00 | .12503968+01              | .83232609+00 |
| .58773435+00              | .16304971+01 | .38401491+00 | .12524823+01              | .83450297+00 |
| .58817058+00              | .16306162+01 | .38363309+00 | .12545816+01              | .83669216+00 |
| .58860681+00              | .16307458+01 | .38325090+00 | .12566950+01              | .83889385+00 |
| .58904304+00              | .16308762+01 | .38286839+00 | .12588225+01              | .84110814+00 |
| .58947928+00              | .16310073+01 | .38248545+00 | .12609644+01              | .84333517+00 |
| .58991551+00              | .16311390+01 | .38210217+00 | .12631208+01              | .84557507+00 |
| .59035174+00              | .16312714+01 | .38171845+00 | .12652919+01              | .84782802+00 |
| .59078797+00              | .16314045+01 | .38133433+00 | .12674778+01              | .85009410+00 |
| .59087580+00              | .16314313+01 | .38125695+00 | .12679197+01              | .85055200+00 |

$$.10566502+01 = \Delta S/R$$

$$.15148710+02 = P_s/P_\infty$$

$$.33469312+01 = \rho_s/\rho_\infty$$

$$.45261493+01 = T_s/T_\infty$$

TABLE 204. CONICAL FLOWFIELD  $\theta_s = 27.5 \text{ DEG}$ ;  $M_\infty = 8.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .82623535+00 | .79999273+01 | .47996553+00 | .57796730+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .47996553+00 | .16524397+01 | .47996553+00 | .96049106+00 | .50000000+00 |
| .48345619+00 | .16524597+01 | .47649780+00 | .96666376+00 | .50750980+00 |
| .48694685+00 | .16525186+01 | .47307399+00 | .97301892+00 | .51518697+00 |
| .49043750+00 | .16526154+01 | .46969137+00 | .97956464+00 | .52303878+00 |
| .49392816+00 | .16527490+01 | .46634730+00 | .98630963+00 | .53107299+00 |
| .49741882+00 | .16529185+01 | .46303928+00 | .99326321+00 | .53929789+00 |
| .50090946+00 | .16531230+01 | .45976486+00 | .10004354+01 | .54772232+00 |
| .50396376+00 | .16533302+01 | .45692546+00 | .10068987+01 | .55526475+00 |
| .50701806+00 | .16535632+01 | .45410848+00 | .10135452+01 | .56297398+00 |
| .51007234+00 | .16538217+01 | .45131242+00 | .10203832+01 | .57085717+00 |
| .51312666+00 | .16541053+01 | .44853581+00 | .10274214+01 | .57892199+00 |
| .51618095+00 | .16544139+01 | .44577723+00 | .10346690+01 | .58717655+00 |
| .51923525+00 | .16547471+01 | .44303523+00 | .10421360+01 | .59562953+00 |
| .52185322+00 | .16550522+01 | .44069708+00 | .10487191+01 | .60303991+00 |
| .52447119+00 | .16553752+01 | .43836920+00 | .10554784+01 | .61060911+00 |
| .52708916+00 | .16557162+01 | .43605070+00 | .10624216+01 | .61834376+00 |
| .52970713+00 | .16560749+01 | .43374068+00 | .10695568+01 | .62625082+00 |
| .53232510+00 | .16564515+01 | .43143826+00 | .10768925+01 | .63433770+00 |
| .53494307+00 | .16568460+01 | .42914253+00 | .10844382+01 | .64261248+00 |
| .53712472+00 | .16571884+01 | .42723389+00 | .10908939+01 | .64965776+00 |
| .53930636+00 | .16575433+01 | .42532872+00 | .10975082+01 | .65684450+00 |
| .54148800+00 | .16579109+01 | .42342650+00 | .11042876+01 | .66417830+00 |
| .54366964+00 | .16582911+01 | .42152666+00 | .11112390+01 | .67166489+00 |
| .54585128+00 | .16586840+01 | .41962866+00 | .11183697+01 | .67931053+00 |
| .54803292+00 | .16590899+01 | .41773190+00 | .11256873+01 | .68712172+00 |
| .54977824+00 | .16594239+01 | .41621500+00 | .11316813+01 | .69349445+00 |
| .55152355+00 | .16597664+01 | .41469821+00 | .11378048+01 | .69998141+00 |
| .55326886+00 | .16601173+01 | .41318122+00 | .11440623+01 | .70658645+00 |
| .55501418+00 | .16604768+01 | .41166370+00 | .11504587+01 | .71331375+00 |
| .55675949+00 | .16608450+01 | .41014531+00 | .11569992+01 | .72016768+00 |
| .55850451+00 | .16612225+01 | .40862552+00 | .11636882+01 | .72715174+00 |
| .55981321+00 | .16615116+01 | .40748465+00 | .11688064+01 | .73247852+00 |
| .56112190+00 | .16618057+01 | .40634277+00 | .11740146+01 | .73788402+00 |
| .56243060+00 | .16621050+01 | .40519970+00 | .11793154+01 | .74337046+00 |
| .56373929+00 | .16624095+01 | .40405528+00 | .11847117+01 | .74894019+00 |
| .56504799+00 | .16627192+01 | .40290935+00 | .11902064+01 | .75459570+00 |
| .56635668+00 | .16630342+01 | .40176174+00 | .11958026+01 | .76033952+00 |
| .56722914+00 | .16632473+01 | .40099565+00 | .11995913+01 | .76421908+00 |
| .56810161+00 | .16634627+01 | .40022867+00 | .12034274+01 | .76813987+00 |
| .56897407+00 | .16636806+01 | .39944076+00 | .12073121+01 | .77210275+00 |

TABLE 204. (Concluded)

| $M_{\infty} = .79999273+01$ |                     |                      | $\Theta_s = .47996553+00$ |                 |
|-----------------------------|---------------------|----------------------|---------------------------|-----------------|
| $\underline{\Theta}$        | $\underline{M_1^*}$ | $\underline{\psi_1}$ | $\underline{x}$           | $\underline{r}$ |
| .56984653+00                | .16639010+01        | .39869186+00         | .12112464+01              | .77610857+00    |
| .57071900+00                | .16641238+01        | .39792192+00         | .12152313+01              | .78015831+00    |
| .57159146+00                | .16643492+01        | .39715087+00         | .12192680+01              | .78425284+00    |
| .57202769+00                | .16644628+01        | .39676492+00         | .12213061+01              | .78631723+00    |
| .57246392+00                | .16645771+01        | .39637868+00         | .12233576+01              | .78839310+00    |
| .57290015+00                | .16646920+01        | .39599212+00         | .12254226+01              | .79048067+00    |
| .57333639+00                | .16648076+01        | .39560523+00         | .12275012+01              | .79258005+00    |
| .57377262+00                | .16649238+01        | .39521804+00         | .12295938+01              | .79469144+00    |
| .57420885+00                | .16650407+01        | .39483052+00         | .12317003+01              | .79681481+00    |
| .57464508+00                | .16651582+01        | .39444265+00         | .12338210+01              | .79895043+00    |
| .57508131+00                | .16652765+01        | .39405443+00         | .12359560+01              | .80109838+00    |
| .57551754+00                | .16653953+01        | .39366587+00         | .12381055+01              | .80325884+00    |
| .57595377+00                | .16655149+01        | .39327693+00         | .12402696+01              | .80543186+00    |
| .57639001+00                | .16656351+01        | .39288764+00         | .12424484+01              | .80761761+00    |
| .57682624+00                | .16657560+01        | .39249798+00         | .12446424+01              | .80981631+00    |
| .57726247+00                | .16658776+01        | .39210790+00         | .12468515+01              | .81202801+00    |
| .57769870+00                | .16659999+01        | .39171743+00         | .12490759+01              | .81425291+00    |
| .57796730+00                | .16660755+01        | .39147682+00         | .12504533+01              | .81562951+00    |

$$.16424890+01 = \Delta S/R$$

$$.25871673+02 = P_s/P_{\infty}$$

$$.36503932+01 = \rho_s/\rho_{\infty}$$

$$.70873663+01 = T_s/T_{\infty}$$

TABLE 205. CONICAL FLOWFIELD  $\theta_s = 27.5 \text{ DEG}$ ;  $M_\infty = 10.0$

| $\underline{u_s}$    | $\underline{M_\infty}$ | $\underline{\theta_s}$ | $\underline{\theta_w}$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .83532216+00         | .10000006+02           | .47996553+00           | .57194500+00           |                 |
| $\underline{\theta}$ | $\underline{M_1^*}$    | $\underline{\psi_1}$   | $\underline{x}$        | $\underline{r}$ |
| .47996553+00         | .16706130+01           | .47996553+00           | .96049106+00           | .50000000+00    |
| .48301986+00         | .16706285+01           | .47692879+00           | .96617878+00           | .50671753+00    |
| .48607418+00         | .16706743+01           | .47392583+00           | .97201790+00           | .51357142+00    |
| .48912851+00         | .16707496+01           | .47095473+00           | .97801451+00           | .52056703+00    |
| .49218283+00         | .16708537+01           | .46801358+00           | .98417498+00           | .52770996+00    |
| .49523716+00         | .16709859+01           | .46510059+00           | .99050642+00           | .53500638+00    |
| .49829148+00         | .16711457+01           | .46221401+00           | .99701621+00           | .54246269+00    |
| .50134579+00         | .16713326+01           | .45935213+00           | .10037120+01           | .55008554+00    |
| .50396376+00         | .16715139+01           | .45691749+00           | .10096056+01           | .55675749+00    |
| .50658173+00         | .16717145+01           | .45449878+00           | .10156477+01           | .56356205+00    |
| .50919970+00         | .16719342+01           | .45209499+00           | .10218442+01           | .57050430+00    |
| .51181767+00         | .16721727+01           | .44970516+00           | .10282014+01           | .57758961+00    |
| .51443564+00         | .16724299+01           | .44732830+00           | .10347260+01           | .58482371+00    |
| .51705361+00         | .16727057+01           | .44496345+00           | .10414249+01           | .59221261+00    |
| .51967158+00         | .16729999+01           | .44260966+00           | .10483057+01           | .59976274+00    |
| .52185322+00         | .16732592+01           | .44065592+00           | .10541844+01           | .60618258+00    |
| .52403487+00         | .16735311+01           | .43870865+00           | .10601999+01           | .61272327+00    |
| .52621651+00         | .16738158+01           | .43676729+00           | .10663574+01           | .61938927+00    |
| .52839815+00         | .16741133+01           | .43483128+00           | .10726623+01           | .62618511+00    |
| .53057979+00         | .16744234+01           | .43290006+00           | .10791203+01           | .63311569+00    |
| .53276143+00         | .16747464+01           | .43097308+00           | .10857377+01           | .64018618+00    |
| .53494307+00         | .16750821+01           | .42904974+00           | .10925210+01           | .64740209+00    |
| .53668839+00         | .16753600+01           | .42751332+00           | .10980715+01           | .65328337+00    |
| .53843370+00         | .16756462+01           | .42597856+00           | .11037363+01           | .65926448+00    |
| .54017901+00         | .16759407+01           | .42444516+00           | .11095193+01           | .66534877+00    |
| .54192433+00         | .16762435+01           | .42291281+00           | .11154245+01           | .67153955+00    |
| .54366964+00         | .16765549+01           | .42138119+00           | .11214562+01           | .67784044+00    |
| .54541495+00         | .16768747+01           | .41984998+00           | .11276189+01           | .68425527+00    |
| .54716027+00         | .16772031+01           | .41831885+00           | .11339175+01           | .69078799+00    |
| .54846925+00         | .16774551+01           | .41717035+00           | .11387336+01           | .69576742+00    |
| .54977824+00         | .16777121+01           | .41602156+00           | .11436312+01           | .70081736+00    |
| .55108722+00         | .16779740+01           | .41487232+00           | .11486126+01           | .70593975+00    |
| .55239611+00         | .16782410+01           | .41372242+00           | .11536798+01           | .71113615+00    |
| .55370481+00         | .16785135+01           | .41257163+00           | .11588349+01           | .71640828+00    |
| .55501350+00         | .16787911+01           | .41141993+00           | .11640815+01           | .72175913+00    |
| .55632219+00         | .16790739+01           | .41026717+00           | .11694220+01           | .72719089+00    |
| .55719466+00         | .16792653+01           | .40949798+00           | .11730362+01           | .73085824+00    |
| .55806712+00         | .16794590+01           | .40872817+00           | .11766941+01           | .73456325+00    |
| .55893958+00         | .16796551+01           | .40795776+00           | .11803971+01           | .73830684+00    |
| .55981205+00         | .16798536+01           | .40718663+00           | .11841458+01           | .74208961+00    |

TABLE 205. (Concluded)

$$M_{\infty} = .10000004+02$$

$$\Theta_s = .47996553+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $\underline{x}$ | $\underline{r}$ |
|--------------|--------------|--------------|-----------------|-----------------|
| .56068451+00 | .16800545+01 | .40641475+00 | .11879413+01    | .74591248+00    |
| .56155697+00 | .16802578+01 | .40564205+00 | .11917845+01    | .74977621+00    |
| .56242944+00 | .16804636+01 | .40486849+00 | .11956766+01    | .75368168+00    |
| .56286567+00 | .16805673+01 | .40448136+00 | .11976413+01    | .75565033+00    |
| .56330190+00 | .16806718+01 | .40409400+00 | .11996185+01    | .75762969+00    |
| .56373813+00 | .16807768+01 | .40370638+00 | .12016085+01    | .75961992+00    |
| .56417436+00 | .16808825+01 | .40331851+00 | .12036114+01    | .76162122+00    |
| .56461059+00 | .16809888+01 | .40293038+00 | .12056273+01    | .76363353+00    |
| .56504682+00 | .16810957+01 | .40254199+00 | .12076564+01    | .76565710+00    |
| .56548306+00 | .16812033+01 | .40215331+00 | .12096988+01    | .76769204+00    |
| .56591929+00 | .16813115+01 | .40176436+00 | .12117546+01    | .76973839+00    |
| .56635552+00 | .16814203+01 | .40137511+00 | .12138241+01    | .77179636+00    |
| .56679175+00 | .16815298+01 | .40098557+00 | .12159073+01    | .77386602+00    |
| .56722798+00 | .16816400+01 | .40059571+00 | .12180045+01    | .77594750+00    |
| .56766421+00 | .16817507+01 | .40020554+00 | .12201157+01    | .77804099+00    |
| .56810044+00 | .16818622+01 | .39981505+00 | .12222411+01    | .78014653+00    |
| .56853668+00 | .16819743+01 | .39942422+00 | .12243810+01    | .78226435+00    |
| .56897291+00 | .16820871+01 | .39903305+00 | .12265355+01    | .78439449+00    |
| .56940914+00 | .16822006+01 | .39864153+00 | .12287046+01    | .78653713+00    |
| .56984537+00 | .16823147+01 | .39824966+00 | .12308887+01    | .78869245+00    |
| .57028160+00 | .16824295+01 | .39785741+00 | .12330880+01    | .79086057+00    |
| .57071783+00 | .16825449+01 | .39746480+00 | .12353025+01    | .79304166+00    |
| .57115407+00 | .16826611+01 | .39707179+00 | .12375324+01    | .79523581+00    |
| .57159030+00 | .16827780+01 | .39667841+00 | .12397780+01    | .79744318+00    |
| .57194500+00 | .16828735+01 | .39635822+00 | .12416156+01    | .79924788+00    |

$$.21685839+01 = \Delta S/R$$

$$.39658131+02 = P_s/P_{\infty}$$

$$.38216179+01 = \rho_s/\rho_{\infty}$$

$$.10377315+02 = T_s/T_{\infty}$$



TABLE 206. CONICAL FLOWFIELD  $\theta_s = 27.5 \text{ DEG}$ ;  $M_\infty = 12.5$

| $\underline{u}_s$    | $\underline{M}_\infty$ | $\underline{\theta}_s$ | $\underline{\theta}_w$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .84126231+00         | .12499998+02           | .47996553+00           | .56807389+00           |                 |
| $\underline{\theta}$ | $\underline{M}_1^*$    | $\underline{\psi}_1$   | $\underline{x}$        | $\underline{r}$ |
| .47996553+00         | .16824931+01           | .47996553+00           | .96049106+00           | .50000000+00    |
| .48258353+00         | .16825045+01           | .47736048+00           | .96553259+00           | .50584158+00    |
| .48520152+00         | .16825385+01           | .47478042+00           | .97069125+00           | .51178741+00    |
| .48781951+00         | .16825945+01           | .47222407+00           | .97597108+00           | .51784103+00    |
| .49043750+00         | .16826720+01           | .46969018+00           | .98137653+00           | .52400624+00    |
| .49305550+00         | .16827707+01           | .46717755+00           | .98691219+00           | .53028702+00    |
| .49567349+00         | .16828900+01           | .46468501+00           | .99258300+00           | .53668759+00    |
| .49829148+00         | .16830297+01           | .46221143+00           | .99839403+00           | .54321235+00    |
| .50090946+00         | .16831894+01           | .45975569+00           | .10043506+01           | .54986586+00    |
| .50352743+00         | .16833689+01           | .45731670+00           | .10104586+01           | .55665310+00    |
| .50570907+00         | .16835334+01           | .45529627+00           | .10156688+01           | .56241509+00    |
| .50789072+00         | .16837113+01           | .45328614+00           | .10209920+01           | .56827672+00    |
| .51007236+00         | .16839025+01           | .45128573+00           | .10264322+01           | .57424130+00    |
| .51225400+00         | .16841069+01           | .44929443+00           | .10319936+01           | .58031236+00    |
| .51443564+00         | .16843245+01           | .44731166+00           | .10376804+01           | .58649353+00    |
| .51661728+00         | .16845551+01           | .44533686+00           | .10434972+01           | .59278865+00    |
| .51879892+00         | .16847987+01           | .44336943+00           | .10494489+01           | .59920182+00    |
| .52098057+00         | .16850553+01           | .44140878+00           | .10555404+01           | .60573724+00    |
| .52316221+00         | .16853248+01           | .43945435+00           | .10617772+01           | .61239947+00    |
| .52490752+00         | .16855497+01           | .43789488+00           | .10668750+01           | .61782367+00    |
| .52665284+00         | .16857829+01           | .43633872+00           | .10720725+01           | .62333463+00    |
| .52839815+00         | .16860244+01           | .43478556+00           | .10773726+01           | .62893496+00    |
| .53014346+00         | .16862743+01           | .43323509+00           | .10827792+01           | .63462745+00    |
| .53188878+00         | .16865324+01           | .43168702+00           | .10882953+01           | .64041498+00    |
| .53363409+00         | .16867990+01           | .43014102+00           | .10939247+01           | .64630064+00    |
| .53537940+00         | .16870739+01           | .42859678+00           | .10996713+01           | .65228766+00    |
| .53712472+00         | .16873573+01           | .42705399+00           | .11055391+01           | .65837941+00    |
| .53887003+00         | .16876491+01           | .42551231+00           | .11115325+01           | .66457935+00    |
| .54017901+00         | .16878737+01           | .42435659+00           | .11161125+01           | .66930253+00    |
| .54148800+00         | .16881030+01           | .42320117+00           | .11207678+01           | .67409036+00    |
| .54279698+00         | .16883373+01           | .42204590+00           | .11255001+01           | .67894442+00    |
| .54410597+00         | .16885764+01           | .42089064+00           | .11303117+01           | .68386653+00    |
| .54541495+00         | .16888205+01           | .41973525+00           | .11352047+01           | .68885846+00    |
| .54672394+00         | .16890696+01           | .41857956+00           | .11401818+01           | .69392226+00    |
| .54803292+00         | .16893237+01           | .41742343+00           | .11452451+01           | .69905986+00    |
| .54934181+00         | .16895830+01           | .41626661+00           | .11503947+01           | .70427281+00    |
| .55065051+00         | .16898479+01           | .41510889+00           | .11556389+01           | .70956300+00    |
| .55152297+00         | .16900273+01           | .41433657+00           | .11591859+01           | .71313418+00    |
| .55239543+00         | .16902090+01           | .41356378+00           | .11627756+01           | .71674177+00    |
| .55326790+00         | .16903931+01           | .41279048+00           | .11664089+01           | .72038442+00    |

TABLE 206. (Concluded)

| $M_{\infty} = .12499998+02$ |              | $\Theta_s = .47996553+00$ |              |              |
|-----------------------------|--------------|---------------------------|--------------|--------------|
| $\Theta$                    | $M_1^*$      | $\psi_1$                  | $x$          | $r$          |
| .55414036+00                | .16905795+01 | .41201660+00              | .11700866+01 | .72406881+00 |
| .55501282+00                | .16907683+01 | .41124211+00              | .11738097+01 | .72778975+00 |
| .55588529+00                | .16909595+01 | .41046694+00              | .11775791+01 | .73155002+00 |
| .55675775+00                | .16911531+01 | .40969104+00              | .11813959+01 | .73535044+00 |
| .55763021+00                | .16913491+01 | .40891436+00              | .11852610+01 | .73919173+00 |
| .55850267+00                | .16915476+01 | .40813685+00              | .11891754+01 | .74307482+00 |
| .55893891+00                | .16916477+01 | .40774775+00              | .11911515+01 | .74503232+00 |
| .55937514+00                | .16917485+01 | .40735844+00              | .11931404+01 | .74700060+00 |
| .55981137+00                | .16918499+01 | .40696888+00              | .11951421+01 | .74897975+00 |
| .56024760+00                | .16919519+01 | .40657907+00              | .11971568+01 | .75096989+00 |
| .56068383+00                | .16920546+01 | .40618901+00              | .11991848+01 | .75297118+00 |
| .56112006+00                | .16921579+01 | .40579867+00              | .12012260+01 | .75498368+00 |
| .56155629+00                | .16922619+01 | .40540808+00              | .12032807+01 | .75700758+00 |
| .56199253+00                | .16923664+01 | .40501720+00              | .12053491+01 | .75904294+00 |
| .56242876+00                | .16924717+01 | .40462604+00              | .12074312+01 | .76108990+00 |
| .56286499+00                | .16925775+01 | .40423459+00              | .12095273+01 | .76314861+00 |
| .56330122+00                | .16926841+01 | .40384282+00              | .12116374+01 | .76521918+00 |
| .56373745+00                | .16927912+01 | .40345074+00              | .12137618+01 | .76730174+00 |
| .56417368+00                | .16928991+01 | .40305835+00              | .12159007+01 | .76939644+00 |
| .56460992+00                | .16930076+01 | .40266563+00              | .12180541+01 | .77150342+00 |
| .56504615+00                | .16931167+01 | .40227257+00              | .12202223+01 | .77362280+00 |
| .56548238+00                | .16932266+01 | .40187917+00              | .12224054+01 | .77575470+00 |
| .56591861+00                | .16933371+01 | .40148541+00              | .12246038+01 | .77789935+00 |
| .56635484+00                | .16934483+01 | .40109129+00              | .12268173+01 | .78005679+00 |
| .56679107+00                | .16935602+01 | .40069678+00              | .12290464+01 | .78222721+00 |
| .56722730+00                | .16936727+01 | .40030190+00              | .12312911+01 | .78441075+00 |
| .56766354+00                | .16937860+01 | .39990664+00              | .12335517+01 | .78660762+00 |
| .56807389+00                | .16938931+01 | .39953446+00              | .12356928+01 | .78888642+00 |

$$.27403346+01 = \Delta S/R$$

$$.61197833+02 = P_s/P_{\infty}$$

$$.39442191+01 = \rho_s/\rho_{\infty}$$

$$.15515830+02 = T_s/T_{\infty}$$

TABLE 207. CONICAL FLOWFIELD  $\theta_s = 27.5 \text{ DEG}$ ;  $M_\infty = 15.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .84453111+00 | .14999960+02 | .47996553+00 | .56596518+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .47996553+00 | .16890305+01 | .47996553+00 | .96049106+00 | .50000000+00 |
| .48258353+00 | .16890421+01 | .47736048+00 | .96563271+00 | .50589403+00 |
| .48520152+00 | .16890762+01 | .47478038+00 | .97089526+00 | .51189498+00 |
| .48781951+00 | .16891324+01 | .47222395+00 | .97628310+00 | .51800658+00 |
| .49043750+00 | .16892103+01 | .46968989+00 | .98180081+00 | .52423279+00 |
| .49305550+00 | .16893093+01 | .46717699+00 | .98745321+00 | .53057772+00 |
| .49567349+00 | .16894291+01 | .46468405+00 | .99324538+00 | .53704574+00 |
| .49829148+00 | .16895694+01 | .46220991+00 | .99918280+00 | .54364151+00 |
| .50090946+00 | .16897298+01 | .45975345+00 | .10052710+01 | .55036975+00 |
| .50352743+00 | .16899101+01 | .45731354+00 | .10115163+01 | .55723576+00 |
| .50570907+00 | .16900753+01 | .45529217+00 | .10168453+01 | .56306659+00 |
| .50789072+00 | .16902540+01 | .45328092+00 | .10222917+01 | .56900012+00 |
| .51007236+00 | .16904461+01 | .45127921+00 | .10278596+01 | .57503987+00 |
| .51225400+00 | .16906515+01 | .44928642+00 | .10335535+01 | .58118953+00 |
| .51443564+00 | .16908701+01 | .44730195+00 | .10393778+01 | .58745292+00 |
| .51661728+00 | .16911018+01 | .44532520+00 | .10453375+01 | .59383410+00 |
| .51879892+00 | .16913467+01 | .44335558+00 | .10514376+01 | .60033733+00 |
| .52098057+00 | .16916046+01 | .44139250+00 | .10576836+01 | .60696716+00 |
| .52316221+00 | .16918757+01 | .43943535+00 | .10640811+01 | .61372826+00 |
| .52490752+00 | .16921019+01 | .43787350+00 | .10693121+01 | .61923499+00 |
| .52665284+00 | .16923364+01 | .43631475+00 | .10746473+01 | .62483168+00 |
| .52839815+00 | .16925794+01 | .43475878+00 | .10800898+01 | .63052106+00 |
| .53014346+00 | .16928307+01 | .43320530+00 | .10856434+01 | .63630619+00 |
| .53188878+00 | .16930905+01 | .43165397+00 | .10913118+01 | .64219007+00 |
| .53363409+00 | .16933588+01 | .43010448+00 | .10970988+01 | .64817598+00 |
| .53537940+00 | .16936356+01 | .42855649+00 | .11030087+01 | .65426735+00 |
| .53712472+00 | .16939209+01 | .42700968+00 | .11090459+01 | .66046776+00 |
| .53887003+00 | .16942148+01 | .42546371+00 | .11152147+01 | .66678093+00 |
| .54017901+00 | .16944410+01 | .42430457+00 | .11199307+01 | .67159218+00 |
| .54148800+00 | .16946721+01 | .42314555+00 | .11247256+01 | .67647084+00 |
| .54279698+00 | .16949081+01 | .42198652+00 | .11296017+01 | .68141869+00 |
| .54410597+00 | .16951492+01 | .42082731+00 | .11345613+01 | .68643761+00 |
| .54541495+00 | .16953952+01 | .41966776+00 | .11396066+01 | .69152959+00 |
| .54672394+00 | .16956463+01 | .41850772+00 | .11447404+01 | .69669668+00 |
| .54803273+00 | .16959029+01 | .41734688+00 | .11499644+01 | .70194024+00 |
| .54934143+00 | .16961649+01 | .41618515+00 | .11552818+01 | .70726287+00 |
| .55065012+00 | .16964320+01 | .41502242+00 | .11606957+01 | .71266723+00 |
| .55152258+00 | .16966131+01 | .41424663+00 | .11643601+01 | .71631678+00 |
| .55239505+00 | .16967965+01 | .41347026+00 | .11680697+01 | .72000448+00 |
| .55326751+00 | .16969823+01 | .41269326+00 | .11718254+01 | .72373106+00 |

TABLE 207. (Concluded)

| $M_{\infty} = .14999960+02$ |              |              | $\Theta_s = .47996553+00$ |              |
|-----------------------------|--------------|--------------|---------------------------|--------------|
| $\Theta$                    | $M_1^*$      | $\psi_1$     | $x$                       | $r$          |
| .55413997+00                | .16971705+01 | .41191559+00 | .11756281+01              | .72749738+00 |
| .55501243+00                | .16973611+01 | .41113717+00 | .11794790+01              | .73130424+00 |
| .55588490+00                | .16975541+01 | .41035795+00 | .11833789+01              | .73515244+00 |
| .55675736+00                | .16977497+01 | .40957788+00 | .11873291+01              | .73904285+00 |
| .55762982+00                | .16979477+01 | .40879692+00 | .11913305+01              | .74297635+00 |
| .55850229+00                | .16981483+01 | .40801499+00 | .11953844+01              | .74695393+00 |
| .55893852+00                | .16982495+01 | .40762364+00 | .11974313+01              | .74895953+00 |
| .55937475+00                | .16983513+01 | .40723202+00 | .11994919+01              | .75097651+00 |
| .55981098+00                | .16984538+01 | .40684012+00 | .12015661+01              | .75300492+00 |
| .56024721+00                | .16985570+01 | .40644795+00 | .12036542+01              | .75504501+00 |
| .56068344+00                | .16986607+01 | .40605548+00 | .12057563+01              | .75709681+00 |
| .56111968+00                | .16987652+01 | .40566272+00 | .12078726+01              | .75916050+00 |
| .56155591+00                | .16988703+01 | .40526964+00 | .12100033+01              | .76123619+00 |
| .56199214+00                | .16989760+01 | .40487624+00 | .12121484+01              | .76332402+00 |
| .56242837+00                | .16990825+01 | .40448252+00 | .12143082+01              | .76542410+00 |
| .56286460+00                | .16991896+01 | .40408847+00 | .12164830+01              | .76753665+00 |
| .56330083+00                | .16992973+01 | .40369407+00 | .12186727+01              | .76966170+00 |
| .56373706+00                | .16994058+01 | .40329933+00 | .12208777+01              | .77179950+00 |
| .56417330+00                | .16995148+01 | .40290421+00 | .12230981+01              | .77395017+00 |
| .56460953+00                | .16996246+01 | .40250874+00 | .12253340+01              | .77611379+00 |
| .56504576+00                | .16997351+01 | .40211289+00 | .12275858+01              | .77829056+00 |
| .56548199+00                | .16998463+01 | .40171663+00 | .12298534+01              | .78048062+00 |
| .56591822+00                | .16999582+01 | .40132000+00 | .12321373+01              | .78268417+00 |
| .56596518+00                | .16999703+01 | .40127726+00 | .12323841+01              | .78292217+00 |

$$.32320940+01 = \Delta S/R$$

$$.87523451+02 = P_s/P_{\infty}$$

$$.40157093+01 = \rho_s/\rho_{\infty}$$

$$.21795266+02 = T_s/T_{\infty}$$

TABLE 208. CONICAL FLOWFIELD  $\theta_s = 27.5 \text{ DEG}$ ;  $M_\infty = 17.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .84651682+00 | .17499999+02 | .47996553+00 | .56469164+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .47996553+00 | .16930019+01 | .47996553+00 | .96049106+00 | .50000000+00 |
| .48258353+00 | .16930134+01 | .47736047+00 | .96569490+00 | .50592661+00 |
| .48520152+00 | .16930476+01 | .47478036+00 | .97102210+00 | .51196185+00 |
| .48781951+00 | .16931040+01 | .47222387+00 | .97647698+00 | .51810946+00 |
| .49043750+00 | .16931820+01 | .46968971+00 | .98206446+00 | .52437356+00 |
| .49305550+00 | .16932812+01 | .46717663+00 | .98778941+00 | .53075837+00 |
| .49567349+00 | .16934014+01 | .46468345+00 | .99365716+00 | .53726839+00 |
| .49829148+00 | .16935420+01 | .46220897+00 | .99967329+00 | .54390837+00 |
| .50090946+00 | .16937029+01 | .45975205+00 | .10058436+01 | .55068325+00 |
| .50352743+00 | .16938836+01 | .45731156+00 | .10121745+01 | .55759834+00 |
| .50570907+00 | .16940492+01 | .45528958+00 | .10175776+01 | .56347210+00 |
| .50789072+00 | .16942284+01 | .45327764+00 | .10231009+01 | .56945053+00 |
| .51007236+00 | .16944211+01 | .45127511+00 | .10287487+01 | .57553726+00 |
| .51225400+00 | .16946271+01 | .44928138+00 | .10345254+01 | .58173607+00 |
| .51443564+00 | .16948463+01 | .44729583+00 | .10404357+01 | .58805086+00 |
| .51661728+00 | .16950788+01 | .44531786+00 | .10464848+01 | .59448585+00 |
| .51879892+00 | .16953244+01 | .44334688+00 | .10526778+01 | .60104545+00 |
| .52098057+00 | .16955832+01 | .44138225+00 | .10590205+01 | .60773437+00 |
| .52316221+00 | .16958551+01 | .43942339+00 | .10655187+01 | .61455742+00 |
| .52490752+00 | .16960821+01 | .43786003+00 | .10708333+01 | .62011588+00 |
| .52665284+00 | .16963175+01 | .43629964+00 | .10762549+01 | .62576638+00 |
| .52839815+00 | .16965614+01 | .43474191+00 | .10817848+01 | .63151169+00 |
| .53014346+00 | .16968137+01 | .43318652+00 | .10874328+01 | .63735496+00 |
| .53188878+00 | .16970745+01 | .43163314+00 | .10931969+01 | .64329939+00 |
| .53363409+00 | .16973438+01 | .43008143+00 | .10990832+01 | .64934836+00 |
| .53537940+00 | .16976217+01 | .42853108+00 | .11050959+01 | .65550538+00 |
| .53712472+00 | .16979082+01 | .42698173+00 | .11112397+01 | .66177423+00 |
| .53887003+00 | .16982035+01 | .42543303+00 | .11175192+01 | .66815875+00 |
| .54017901+00 | .16984306+01 | .42427173+00 | .11223209+01 | .67302552+00 |
| .54148800+00 | .16986628+01 | .42311044+00 | .11272041+01 | .67796149+00 |
| .54279698+00 | .16988999+01 | .42194902+00 | .11321710+01 | .68296854+00 |
| .54410597+00 | .16991421+01 | .42078730+00 | .11372240+01 | .68804862+00 |
| .54541495+00 | .16993894+01 | .41962513+00 | .11423656+01 | .69320379+00 |
| .54672384+00 | .16996420+01 | .41846225+00 | .11475982+01 | .69843581+00 |
| .54803254+00 | .16999001+01 | .41729844+00 | .11529242+01 | .70374654+00 |
| .54934123+00 | .17001634+01 | .41613367+00 | .11583470+01 | .70913908+00 |
| .55064993+00 | .17004321+01 | .41496776+00 | .11638697+01 | .71461578+00 |
| .55152239+00 | .17006141+01 | .41418976+00 | .11676086+01 | .71831492+00 |
| .55239485+00 | .17007986+01 | .41341113+00 | .11713942+01 | .72205339+00 |
| .55326732+00 | .17009855+01 | .41263178+00 | .11752276+01 | .72583202+00 |



TABLE 208. (Concluded)

$$M_{\infty} = .17499999+02$$

$$\Theta_s = .47996553+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .55413978+00 | .17011748+01 | .41185168+00 | .11791098+01 | .72965161+00 |
| .55501224+00 | .17013665+01 | .41107077+00 | .11830418+01 | .73351298+00 |
| .55588470+00 | .17015608+01 | .41028899+00 | .11870248+01 | .73741706+00 |
| .55675717+00 | .17017575+01 | .40950627+00 | .11910599+01 | .74136472+00 |
| .55762963+00 | .17019568+01 | .40872257+00 | .11951481+01 | .74535690+00 |
| .55850209+00 | .17021587+01 | .40793782+00 | .11992909+01 | .74939465+00 |
| .55893832+00 | .17022605+01 | .40754502+00 | .12013830+01 | .75143088+00 |
| .55937456+00 | .17023631+01 | .40715194+00 | .12034893+01 | .75347886+00 |
| .55981079+00 | .17024663+01 | .40675855+00 | .12056098+01 | .75553875+00 |
| .56024702+00 | .17025701+01 | .40636487+00 | .12077447+01 | .75761062+00 |
| .56068325+00 | .17026746+01 | .40597086+00 | .12098941+01 | .75969462+00 |
| .56111948+00 | .17027798+01 | .40557654+00 | .12120563+01 | .76179092+00 |
| .56155571+00 | .17028856+01 | .40518188+00 | .12142374+01 | .76389964+00 |
| .56199194+00 | .17029921+01 | .40478688+00 | .12164316+01 | .76602096+00 |
| .56242818+00 | .17030993+01 | .40439153+00 | .12186411+01 | .76815493+00 |
| .56286441+00 | .17032071+01 | .40399582+00 | .12208661+01 | .77030183+00 |
| .56330064+00 | .17033157+01 | .40359974+00 | .12231067+01 | .77246168+00 |
| .56373687+00 | .17034249+01 | .40320329+00 | .12253632+01 | .77463475+00 |
| .56417310+00 | .17035348+01 | .40280643+00 | .12276356+01 | .77682107+00 |
| .56460933+00 | .17036454+01 | .40240919+00 | .12299244+01 | .77902094+00 |
| .56469164+00 | .17036663+01 | .40233419+00 | .12303580+01 | .77943747+00 |

$$.36604947+01 = \Delta S/R$$

$$.11863621+03 = P_s/P_{\infty}$$

$$.40606291+01 = \rho_s/\rho_{\infty}$$

$$.29216214+02 = T_s/T_{\infty}$$

TABLE 209. CONICAL FLOWFIELD  $\theta_s = 27.5 \text{ DEG}$ ;  $M_\infty = 20.0$

| $\underline{u}_s$    | $\underline{M}_\infty$ | $\underline{\theta}_s$ | $\underline{\theta}_w$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .84781139+00         | .19999977+02           | .47996553+00           | .56386419+00           |                 |
| $\underline{\theta}$ | $\underline{M}_1^*$    | $\underline{\psi}_1$   | $\underline{x}$        | $\underline{r}$ |
| .47996553+00         | .16955910+01           | .47996553+00           | .96049106+00           | .50000000+00    |
| .48258353+00         | .16956026+01           | .47736047+00           | .96573600+00           | .50594815+00    |
| .48520152+00         | .16956368+01           | .47478035+00           | .97110584+00           | .51200601+00    |
| .48781951+00         | .16956933+01           | .47222382+00           | .97660513+00           | .51817745+00    |
| .49043750+00         | .16957714+01           | .46968959+00           | .98223875+00           | .52446663+00    |
| .49305550+00         | .16958708+01           | .46717640+00           | .98801175+00           | .53087783+00    |
| .49567349+00         | .16959911+01           | .46468304+00           | .99392950+00           | .53741565+00    |
| .49829148+00         | .16961320+01           | .46220833+00           | .99999779+00           | .54408493+00    |
| .50090946+00         | .16962931+01           | .45975111+00           | .10062225+01           | .55089065+00    |
| .50352743+00         | .16964742+01           | .45731023+00           | .10126101+01           | .55783830+00    |
| .50570907+00         | .16966401+01           | .45528786+00           | .10180624+01           | .56374051+00    |
| .50789072+00         | .16968196+01           | .45327545+00           | .10236367+01           | .56974873+00    |
| .51007236+00         | .16970126+01           | .45127238+00           | .10293374+01           | .57586662+00    |
| .51225400+00         | .16972190+01           | .44927802+00           | .10351691+01           | .58209801+00    |
| .51443564+00         | .16974387+01           | .44729175+00           | .10411365+01           | .58844692+00    |
| .51661728+00         | .16976716+01           | .44531298+00           | .10472449+01           | .59491766+00    |
| .51879892+00         | .16979178+01           | .44334107+00           | .10534997+01           | .60151473+00    |
| .52098057+00         | .16981771+01           | .44137541+00           | .10599067+01           | .60824292+00    |
| .52316221+00         | .16984496+01           | .43941540+00           | .10664718+01           | .61510714+00    |
| .52490752+00         | .16986771+01           | .43785103+00           | .10718420+01           | .62070003+00    |
| .52665284+00         | .16989131+01           | .43628956+00           | .10773211+01           | .62638631+00    |
| .52839815+00         | .16991575+01           | .43473065+00           | .10829125+01           | .63216889+00    |
| .53014346+00         | .16994104+01           | .43317398+00           | .10886202+01           | .63805091+00    |
| .53188878+00         | .16996719+01           | .43161923+00           | .10944482+01           | .64403571+00    |
| .53363409+00         | .16999419+01           | .43006606+00           | .11004006+01           | .65012668+00    |
| .53537940+00         | .17002206+01           | .42851412+00           | .11064819+01           | .65632749+00    |
| .53712472+00         | .17005080+01           | .42696307+00           | .11126967+01           | .66264195+00    |
| .53887003+00         | .17008041+01           | .42541256+00           | .11190501+01           | .66907407+00    |
| .54017901+00         | .17010320+01           | .42424981+00           | .11239090+01           | .67397788+00    |
| .54148600+00         | .17012648+01           | .42308699+00           | .11288511+01           | .67895213+00    |
| .54279698+00         | .17015027+01           | .42192397+00           | .11338787+01           | .68399871+00    |
| .54410597+00         | .17017456+01           | .42076057+00           | .11389942+01           | .68911965+00    |
| .54541495+00         | .17019937+01           | .41959663+00           | .11442002+01           | .69431705+00    |
| .54672365+00         | .17022475+01           | .41843177+00           | .11494985+01           | .69959204+00    |
| .54803234+00         | .17025065+01           | .41726603+00           | .11548929+01           | .70494796+00    |
| .54934104+00         | .17027708+01           | .41609922+00           | .11603863+01           | .71038724+00    |
| .55064973+00         | .17030404+01           | .41493118+00           | .11659819+01           | .71591235+00    |
| .55152220+00         | .17032231+01           | .41415170+00           | .11697707+01           | .71964477+00    |
| .55239466+00         | .17034082+01           | .41337153+00           | .11736073+01           | .72341724+00    |
| .55326712+00         | .17035958+01           | .41259062+00           | .11774928+01           | .72723068+00    |

TABLE 209. (Concluded)

| $M_{\infty} = .19999977 + 02$ |                     |                      | $\Theta_s = .47996553 + 00$ |                 |
|-------------------------------|---------------------|----------------------|-----------------------------|-----------------|
| $\underline{\Theta}$          | $\underline{M_1^*}$ | $\underline{\psi_1}$ | $\underline{x}$             | $\underline{r}$ |
| .55413958+00                  | .17037859+01        | .41180890+00         | .11814282+01                | .73108594+00    |
| .55501205+00                  | .17039784+01        | .41102631+00         | .11854146+01                | .73498382+00    |
| .55588451+00                  | .17041734+01        | .41024280+00         | .11894533+01                | .73892535+00    |
| .55675697+00                  | .17043710+01        | .40945829+00         | .11935452+01                | .74291140+00    |
| .55762944+00                  | .17045711+01        | .40867276+00         | .11976918+01                | .74694298+00    |
| .55850190+00                  | .17047738+01        | .40788611+00         | .12018942+01                | .75102104+00    |
| .55893813+00                  | .17048762+01        | .40749235+00         | .12040166+01                | .75307778+00    |
| .55937436+00                  | .17049792+01        | .40709828+00         | .12061536+01                | .75514659+00    |
| .55981059+00                  | .17050828+01        | .40670390+00         | .12083052+01                | .75722755+00    |
| .56024683+00                  | .17051871+01        | .40630919+00         | .12104715+01                | .75932079+00    |
| .56068306+00                  | .17052921+01        | .40591416+00         | .12126527+01                | .76142644+00    |
| .56111929+00                  | .17053977+01        | .40551878+00         | .12148492+01                | .76354469+00    |
| .56155552+00                  | .17055040+01        | .40512305+00         | .12170609+01                | .76567563+00    |
| .56199175+00                  | .17056111+01        | .40472697+00         | .12192881+01                | .76781945+00    |
| .56242798+00                  | .17057187+01        | .40433053+00         | .12215310+01                | .76997622+00    |
| .56286421+00                  | .17058271+01        | .40393370+00         | .12237898+01                | .77214619+00    |
| .56330045+00                  | .17059361+01        | .40353649+00         | .12260646+01                | .77432945+00    |
| .56373668+00                  | .17060459+01        | .40313888+00         | .12283558+01                | .77652626+00    |
| .56386419+00                  | .17060781+01        | .40302258+00         | .12290286+01                | .77717096+00    |

$$.40386545+01 = \Delta S/R$$

$$.15453491+03 = P_s/P_{\infty}$$

$$.40905576+01 = \rho_s/\rho_{\infty}$$

$$.37778447+02 = T_s/T_{\infty}$$

TABLE 210. CONICAL FLOWFIELD  $\theta_s = 27.5 \text{ DEG}$ ;  $M_\infty = 22.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .84870174+00 | .22499918+02 | .47996553+00 | .56329654+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .47996553+00 | .16973716+01 | .47996553+00 | .96049106+00 | .50000000+00 |
| .48258353+00 | .16973832+01 | .47736047+00 | .96576449+00 | .50596307+00 |
| .48520152+00 | .16974175+01 | .47478034+00 | .97116398+00 | .51203666+00 |
| .48781951+00 | .16974740+01 | .47222378+00 | .97669412+00 | .51822466+00 |
| .49043750+00 | .16975522+01 | .46968950+00 | .98235981+00 | .52453127+00 |
| .49305550+00 | .16976517+01 | .46717624+00 | .98816620+00 | .53096082+00 |
| .49567349+00 | .16977722+01 | .46468277+00 | .99411876+00 | .53751797+00 |
| .49829148+00 | .16979132+01 | .46220789+00 | .10002232+01 | .54420759+00 |
| .50090946+00 | .16980745+01 | .45975045+00 | .10064856+01 | .55103474+00 |
| .50352745+00 | .16982242+01 | .45771507+00 | .10118298+01 | .55683314+00 |
| .50527275+00 | .16983876+01 | .45569037+00 | .10172921+01 | .56273417+00 |
| .50745439+00 | .16985646+01 | .45367570+00 | .10228769+01 | .56874143+00 |
| .50963603+00 | .16987552+01 | .45167045+00 | .10285886+01 | .57485856+00 |
| .51181767+00 | .16989591+01 | .44967397+00 | .10344316+01 | .58108941+00 |
| .51399931+00 | .16991765+01 | .44768564+00 | .10404110+01 | .58743807+00 |
| .51618095+00 | .16994071+01 | .44570486+00 | .10465320+01 | .59390880+00 |
| .51836260+00 | .16996509+01 | .44373101+00 | .10527998+01 | .60050610+00 |
| .52010791+00 | .16998555+01 | .44215649+00 | .10579237+01 | .60587832+00 |
| .52185322+00 | .17000686+01 | .44058568+00 | .10631484+01 | .61133714+00 |
| .52359854+00 | .17002901+01 | .43901827+00 | .10684772+01 | .61688526+00 |
| .52534385+00 | .17005201+01 | .43745395+00 | .10739134+01 | .62252545+00 |
| .52708916+00 | .17007586+01 | .43589237+00 | .10794607+01 | .62826069+00 |
| .52883448+00 | .17010055+01 | .43433321+00 | .10851227+01 | .63409408+00 |
| .53057979+00 | .17012610+01 | .43277615+00 | .10909035+01 | .64002880+00 |
| .53232510+00 | .17015251+01 | .43122084+00 | .10968071+01 | .64606827+00 |
| .53363409+00 | .17017208+01 | .43005531+00 | .11013180+01 | .65066868+00 |
| .53494307+00 | .17019374+01 | .42889044+00 | .11059023+01 | .65533158+00 |
| .53625206+00 | .17021509+01 | .42772607+00 | .11105622+01 | .66005862+00 |
| .53756104+00 | .17023692+01 | .42656205+00 | .11152995+01 | .66485138+00 |
| .53887003+00 | .17025926+01 | .42539824+00 | .11201166+01 | .66971175+00 |
| .54017901+00 | .17028209+01 | .42423447+00 | .11250156+01 | .67464144+00 |
| .54148800+00 | .17030542+01 | .42307060+00 | .11299989+01 | .67964247+00 |
| .54279698+00 | .17032926+01 | .42190646+00 | .11350689+01 | .68471668+00 |
| .54366964+00 | .17034544+01 | .42113014+00 | .11384983+01 | .68881411+00 |
| .54454230+00 | .17036185+01 | .42035357+00 | .11419683+01 | .69159987+00 |
| .54541486+00 | .17037850+01 | .41957664+00 | .11454790+01 | .69509288+00 |
| .54628732+00 | .17039540+01 | .41879930+00 | .11490315+01 | .69862095+00 |
| .54715978+00 | .17041253+01 | .41802156+00 | .11526269+01 | .70218506+00 |
| .54803225+00 | .17042990+01 | .41724338+00 | .11562660+01 | .70578599+00 |
| .54890471+00 | .17044750+01 | .41646469+00 | .11599499+01 | .70942445+00 |

TABLE 210. (Concluded)

$$M_{\infty} = .22499918+02$$

$$\Theta_s = .47996553+00$$

| $\underline{\Theta}$ | $\underline{M^*}$<br>$\underline{1}$ | $\underline{\psi}$<br>$\underline{1}$ | $\underline{x}$ | $\underline{r}$ |
|----------------------|--------------------------------------|---------------------------------------|-----------------|-----------------|
| .54977717+00         | .17046534+01                         | .41568545+00                          | .11636795+01    | .71310122+00    |
| .55021340+00         | .17047435+01                         | .41529561+00                          | .11655617+01    | .71495420+00    |
| .55064964+00         | .17048342+01                         | .41490560+00                          | .11674556+01    | .71681705+00    |
| .55108587+00         | .17049255+01                         | .41451544+00                          | .11693614+01    | .71868982+00    |
| .55152210+00         | .17050174+01                         | .41412508+00                          | .11712794+01    | .72057273+00    |
| .55195833+00         | .17051099+01                         | .41373456+00                          | .11732094+01    | .72246575+00    |
| .55239456+00         | .17052030+01                         | .41334385+00                          | .11751517+01    | .72436903+00    |
| .55283079+00         | .17052968+01                         | .41295294+00                          | .11771064+01    | .72628271+00    |
| .55326702+00         | .17053911+01                         | .41256183+00                          | .11790737+01    | .72820692+00    |
| .55370326+00         | .17054861+01                         | .41217051+00                          | .11810537+01    | .73014171+00    |
| .55413949+00         | .17055817+01                         | .41177897+00                          | .11830465+01    | .73208718+00    |
| .55457572+00         | .17056779+01                         | .41138721+00                          | .11850522+01    | .73404349+00    |
| .55501195+00         | .17057748+01                         | .41099521+00                          | .11870711+01    | .73601076+00    |
| .55544818+00         | .17058722+01                         | .41060297+00                          | .11891033+01    | .73798908+00    |
| .55588441+00         | .17059703+01                         | .41021048+00                          | .11911488+01    | .73997853+00    |
| .55632064+00         | .17060691+01                         | .40981773+00                          | .11932079+01    | .74197932+00    |
| .55675688+00         | .17061685+01                         | .40942473+00                          | .11952808+01    | .74399151+00    |
| .55719311+00         | .17062685+01                         | .40903147+00                          | .11973675+01    | .74601525+00    |
| .55762934+00         | .17063692+01                         | .40863791+00                          | .11994682+01    | .74805067+00    |
| .55806557+00         | .17064705+01                         | .40824407+00                          | .12015831+01    | .75009789+00    |
| .55850180+00         | .17065725+01                         | .40784994+00                          | .12037124+01    | .75215705+00    |
| .55893803+00         | .17066751+01                         | .40745548+00                          | .12058562+01    | .75422823+00    |
| .55937427+00         | .17067784+01                         | .40706072+00                          | .12080148+01    | .75631168+00    |
| .55981050+00         | .17068824+01                         | .40666564+00                          | .12101882+01    | .75840744+00    |
| .56024673+00         | .17069870+01                         | .40627021+00                          | .12123765+01    | .76051567+00    |
| .56068296+00         | .17070923+01                         | .40587445+00                          | .12145802+01    | .76263653+00    |
| .56111919+00         | .17071983+01                         | .40547834+00                          | .12167993+01    | .76477018+00    |
| .56155542+00         | .17073049+01                         | .40508187+00                          | .12190339+01    | .76691670+00    |
| .56199165+00         | .17074123+01                         | .40468504+00                          | .12212843+01    | .76907631+00    |
| .56242789+00         | .17075203+01                         | .40428782+00                          | .12235507+01    | .77124913+00    |
| .56286412+00         | .17076290+01                         | .40389020+00                          | .12258332+01    | .77343532+00    |
| .56329654+00         | .17077375+01                         | .40349567+00                          | .12281120+01    | .77561579+00    |

$$.43764642+01 = \Delta S/R$$

$$.19521914+03 = P_s/P_{\infty}$$

$$.41114350+01 = \rho_s/\rho_{\infty}$$

$$.47481996+02 = T_s/T_{\infty}$$

TABLE 211. CONICAL FLOWFIELD  $\theta_s = 27.5$  DEG;  $M_\infty = 25.0$

| $\underline{u}_s$    | $\underline{M}_\infty$ | $\underline{\theta}_s$ | $\underline{\theta}_w$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .84934004+00         | .25000034+02           | .47996553+00           | .56289036+00           |                 |
| $\underline{\theta}$ | $\underline{M}_1^*$    | $\underline{\psi}_1$   | $\underline{x}$        | $\underline{r}$ |
| .47996553+00         | .16986482+01           | .47996553+00           | .96049106+00           | .50000000+00    |
| .48258353+00         | .16986598+01           | .47736047+00           | .96578515+00           | .50597389+00    |
| .48520152+00         | .16986941+01           | .47478033+00           | .97120603+00           | .51205883+00    |
| .48781951+00         | .16987507+01           | .47222376+00           | .97675850+00           | .51825882+00    |
| .49043750+00         | .16988290+01           | .46968944+00           | .98244739+00           | .52457803+00    |
| .49305550+00         | .16989285+01           | .46717612+00           | .98827787+00           | .53102083+00    |
| .49567349+00         | .16990491+01           | .46468256+00           | .99425553+00           | .53759193+00    |
| .49829148+00         | .16991902+01           | .46220757+00           | .10003862+01           | .54429627+00    |
| .50090946+00         | .16993516+01           | .45974997+00           | .10066760+01           | .55113897+00    |
| .50309110+00         | .16995014+01           | .45771444+00           | .10120438+01           | .55695091+00    |
| .50527275+00         | .16996650+01           | .45568954+00           | .10175307+01           | .56286616+00    |
| .50745439+00         | .16998422+01           | .45367465+00           | .10231410+01           | .56888827+00    |
| .50963603+00         | .17000329+01           | .45166912+00           | .10288791+01           | .57502094+00    |
| .51181767+00         | .17002370+01           | .44967233+00           | .10347496+01           | .58126805+00    |
| .51399931+00         | .17004546+01           | .44768366+00           | .10407575+01           | .58763370+00    |
| .51618095+00         | .17006854+01           | .44570248+00           | .10469081+01           | .59412225+00    |
| .51836260+00         | .17009295+01           | .44372816+00           | .10532068+01           | .60073827+00    |
| .52010791+00         | .17011343+01           | .44215325+00           | .10583563+01           | .60612608+00    |
| .52185322+00         | .17013476+01           | .44058200+00           | .10636075+01           | .61160114+00    |
| .52359854+00         | .17015694+01           | .43901411+00           | .10689437+01           | .61716612+00    |
| .52534385+00         | .17017996+01           | .43744926+00           | .10744282+01           | .62282386+00    |
| .52708916+00         | .17020384+01           | .43588711+00           | .10800049+01           | .62857743+00    |
| .52883448+00         | .17022856+01           | .43432735+00           | .10856972+01           | .63442979+00    |
| .53057979+00         | .17025415+01           | .43276963+00           | .10915094+01           | .64038429+00    |
| .53232510+00         | .17028059+01           | .43121362+00           | .10974455+01           | .64644434+00    |
| .53363409+00         | .17030098+01           | .43004753+00           | .11019817+01           | .65106079+00    |
| .53494307+00         | .17032187+01           | .42888205+00           | .11065920+01           | .65574024+00    |
| .53625206+00         | .17034325+01           | .42771704+00           | .11112785+01           | .66048432+00    |
| .53756104+00         | .17036512+01           | .42655237+00           | .11160432+01           | .66529473+00    |
| .53887003+00         | .17038748+01           | .42538786+00           | .11208885+01           | .67017327+00    |
| .54017901+00         | .17041035+01           | .42422336+00           | .11258165+01           | .67512175+00    |
| .54148800+00         | .17043372+01           | .42305871+00           | .11308297+01           | .68014217+00    |
| .54279698+00         | .17045759+01           | .42189376+00           | .11359305+01           | .68523645+00    |
| .54366964+00         | .17047380+01           | .42111687+00           | .11393810+01           | .68867471+00    |
| .54454230+00         | .17049023+01           | .42033972+00           | .11428724+01           | .69214742+00    |
| .54541486+00         | .17050691+01           | .41956218+00           | .11464050+01           | .69565480+00    |
| .54628732+00         | .17052384+01           | .41878422+00           | .11499799+01           | .69919755+00    |
| .54715978+00         | .17054100+01           | .41800584+00           | .11535980+01           | .70277669+00    |
| .54803225+00         | .17055839+01           | .41722699+00           | .11572606+01           | .70639304+00    |
| .54890471+00         | .17057603+01           | .41644762+00           | .11609683+01           | .71004727+00    |



TABLE 211. (Concluded)

$$M_{\infty} = .25000034+02$$

$$\Theta_s = .47996553+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .54977717+00 | .17059390+01 | .41566768+00 | .11647221+01 | .71374016+00 |
| .55021340+00 | .17060292+01 | .41527747+00 | .11666166+01 | .71560133+00 |
| .55064964+00 | .17061201+01 | .41488710+00 | .11685231+01 | .71747246+00 |
| .55108587+00 | .17062116+01 | .41449656+00 | .11704416+01 | .71935365+00 |
| .55152210+00 | .17063036+01 | .41410583+00 | .11723723+01 | .72124508+00 |
| .55195833+00 | .17063963+01 | .41371492+00 | .11743152+01 | .72314671+00 |
| .55239456+00 | .17064896+01 | .41332382+00 | .11762706+01 | .72505873+00 |
| .55283079+00 | .17065835+01 | .41293251+00 | .11782385+01 | .72698122+00 |
| .55326702+00 | .17066781+01 | .41254099+00 | .11802191+01 | .72891435+00 |
| .55370326+00 | .17067733+01 | .41214927+00 | .11822126+01 | .73085818+00 |
| .55413949+00 | .17068690+01 | .41175731+00 | .11842190+01 | .73281277+00 |
| .55457572+00 | .17069654+01 | .41136512+00 | .11862386+01 | .73477831+00 |
| .55501195+00 | .17070625+01 | .41097269+00 | .11882714+01 | .73675497+00 |
| .55544818+00 | .17071601+01 | .41058001+00 | .11903177+01 | .73874276+00 |
| .55588441+00 | .17072585+01 | .41018708+00 | .11923775+01 | .74074185+00 |
| .55632064+00 | .17073574+01 | .40979388+00 | .11944511+01 | .74275234+00 |
| .55675688+00 | .17074570+01 | .40940042+00 | .11965386+01 | .74477440+00 |
| .55719311+00 | .17075572+01 | .40900669+00 | .11986400+01 | .74680811+00 |
| .55762934+00 | .17076582+01 | .40861267+00 | .12007557+01 | .74885364+00 |
| .55806557+00 | .17077597+01 | .40821835+00 | .12028859+01 | .75091112+00 |
| .55850180+00 | .17078619+01 | .40782372+00 | .12050305+01 | .75298063+00 |
| .55893803+00 | .17079648+01 | .40742878+00 | .12071897+01 | .75506231+00 |
| .55937427+00 | .17080683+01 | .40703351+00 | .12093639+01 | .75715635+00 |
| .55981050+00 | .17081725+01 | .40663791+00 | .12115532+01 | .75926291+00 |
| .56024673+00 | .17082774+01 | .40624198+00 | .12137577+01 | .76138205+00 |
| .56068296+00 | .17083829+01 | .40584569+00 | .12159776+01 | .76351395+00 |
| .56111919+00 | .17084891+01 | .40544904+00 | .12182131+01 | .76565879+00 |
| .56155542+00 | .17085960+01 | .40505203+00 | .12204644+01 | .76781669+00 |
| .56199165+00 | .17087036+01 | .40465463+00 | .12227317+01 | .76998778+00 |
| .56242789+00 | .17088119+01 | .40425685+00 | .12250151+01 | .77217223+00 |
| .56286412+00 | .17089209+01 | .40385868+00 | .12273150+01 | .77437025+00 |
| .56289036+00 | .17089275+01 | .40383470+00 | .12274538+01 | .77450285+00 |

$$.46813717+01 = \Delta S/R$$

$$.24069276+03 = P_s/P_{\infty}$$

$$.41265514+01 = \rho_s/\rho_{\infty}$$

$$.58327823+02 = T_s/T_{\infty}$$

TABLE 212. CONICAL FLOWFIELD  $\theta_s = 27.5 \text{ DEG}$ ;  $M_\infty = 27.5$

| $u_s$        | $M_1^*$      | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .84981294+00 | .27499936+02 | .47996553+00 | .56258965+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .47996553+00 | .16995940+01 | .47996553+00 | .96049106+00 | .50000000+00 |
| .48258353+00 | .16996056+01 | .47736047+00 | .96580044+00 | .50598191+00 |
| .48520152+00 | .16996399+01 | .47478032+00 | .97123726+00 | .51207530+00 |
| .48781951+00 | .16996965+01 | .47222374+00 | .97680622+00 | .51828414+00 |
| .49043750+00 | .16997748+01 | .46968940+00 | .98251224+00 | .52461266+00 |
| .49305550+00 | .16998745+01 | .46717603+00 | .98836067+00 | .53106532+00 |
| .49567349+00 | .16999951+01 | .46468241+00 | .99435699+00 | .53764679+00 |
| .49829148+00 | .17001363+01 | .46220734+00 | .10005072+01 | .54436210+00 |
| .50090946+00 | .17002978+01 | .45974962+00 | .10068173+01 | .55121633+00 |
| .50309110+00 | .17004477+01 | .45771396+00 | .10122028+01 | .55703840+00 |
| .50527275+00 | .17006114+01 | .45568892+00 | .10177080+01 | .56296421+00 |
| .50745439+00 | .17007887+01 | .45367386+00 | .10233372+01 | .56899737+00 |
| .50963603+00 | .17009795+01 | .45166814+00 | .10290950+01 | .57514161+00 |
| .51181767+00 | .17011838+01 | .44967112+00 | .10349860+01 | .58140082+00 |
| .51399931+00 | .17014015+01 | .44768218+00 | .10410152+01 | .58777919+00 |
| .51618095+00 | .17016325+01 | .44570070+00 | .10471880+01 | .59428108+00 |
| .51836260+00 | .17018768+01 | .44372604+00 | .10535097+01 | .60091103+00 |
| .52010791+00 | .17020818+01 | .44215082+00 | .10586783+01 | .60631050+00 |
| .52185322+00 | .17022952+01 | .44057925+00 | .10639493+01 | .61179767+00 |
| .52359854+00 | .17025172+01 | .43901100+00 | .10693258+01 | .61737522+00 |
| .52534385+00 | .17027476+01 | .43744576+00 | .10748115+01 | .62304606+00 |
| .52708916+00 | .17029865+01 | .43588319+00 | .10804100+01 | .62881324+00 |
| .52883448+00 | .17032340+01 | .43432297+00 | .10861250+01 | .63467979+00 |
| .53057979+00 | .17034901+01 | .43276476+00 | .10919607+01 | .64064907+00 |
| .53232510+00 | .17037547+01 | .43120822+00 | .10979211+01 | .64672448+00 |
| .53363409+00 | .17039589+01 | .43004170+00 | .11024761+01 | .65135291+00 |
| .53494307+00 | .17041680+01 | .42887578+00 | .11071057+01 | .65604469+00 |
| .53625206+00 | .17043820+01 | .42771030+00 | .11118121+01 | .66080151+00 |
| .53756104+00 | .17046009+01 | .42654513+00 | .11165974+01 | .66562507+00 |
| .53887003+00 | .17048248+01 | .42538010+00 | .11214637+01 | .67051719+00 |
| .54017901+00 | .17050537+01 | .42421504+00 | .11264134+01 | .67547968+00 |
| .54148800+00 | .17052877+01 | .42304981+00 | .11314489+01 | .68051460+00 |
| .54279698+00 | .17055267+01 | .42188425+00 | .11365727+01 | .68562387+00 |
| .54366264+00 | .17056889+01 | .42110695+00 | .11400389+01 | .68907237+00 |
| .54454230+00 | .17058534+01 | .42032936+00 | .11435463+01 | .69255557+00 |
| .54541476+00 | .17060206+01 | .41955131+00 | .11470949+01 | .69607329+00 |
| .54628722+00 | .17061901+01 | .41877288+00 | .11506864+01 | .69962699+00 |
| .54715969+00 | .17063619+01 | .41799401+00 | .11543217+01 | .70321741+00 |
| .54803215+00 | .17065361+01 | .41721467+00 | .11580017+01 | .70684525+00 |
| .54890461+00 | .17067127+01 | .41643479+00 | .11617272+01 | .71051125+00 |

TABLE 212. (Concluded)

$$M_{\infty} = .27499936+02$$

$$\Theta_s = .47996553+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .54977708+00 | .17068916+01 | .41565431+00 | .11654992+01 | .71421618+00 |
| .55021331+00 | .17069820+01 | .41526384+00 | .11674030+01 | .71608349+00 |
| .55064954+00 | .17070730+01 | .41487319+00 | .11693187+01 | .71796083+00 |
| .55108577+00 | .17071646+01 | .41448236+00 | .11712467+01 | .71984834+00 |
| .55152200+00 | .17072568+01 | .41409136+00 | .11731869+01 | .72174609+00 |
| .55195823+00 | .17073496+01 | .41370016+00 | .11751395+01 | .72365418+00 |
| .55239446+00 | .17074430+01 | .41330876+00 | .11771046+01 | .72557268+00 |
| .55283070+00 | .17075371+01 | .41291716+00 | .11790824+01 | .72750179+00 |
| .55326693+00 | .17076318+01 | .41252534+00 | .11810730+01 | .72944158+00 |
| .55370316+00 | .17077271+01 | .41213331+00 | .11830766+01 | .73139213+00 |
| .55413939+00 | .17078230+01 | .41174103+00 | .11850933+01 | .73335361+00 |
| .55457562+00 | .17079196+01 | .41134853+00 | .11871232+01 | .73532611+00 |
| .55501185+00 | .17080168+01 | .41095578+00 | .11891665+01 | .73730975+00 |
| .55544809+00 | .17081146+01 | .41056278+00 | .11912233+01 | .73930465+00 |
| .55588432+00 | .17082130+01 | .41016951+00 | .11932939+01 | .74131094+00 |
| .55632055+00 | .17083121+01 | .40977698+00 | .11953782+01 | .74332871+00 |
| .55675678+00 | .17084119+01 | .40938217+00 | .11974767+01 | .74535815+00 |
| .55719301+00 | .17085122+01 | .40898809+00 | .11995892+01 | .74739935+00 |
| .55762924+00 | .17086133+01 | .40859371+00 | .12017161+01 | .74945241+00 |
| .55806547+00 | .17087150+01 | .40819903+00 | .12038575+01 | .75151752+00 |
| .55850171+00 | .17088174+01 | .40780404+00 | .12060136+01 | .75359480+00 |
| .55893794+00 | .17089204+01 | .40740873+00 | .12081845+01 | .75568433+00 |
| .55937417+00 | .17090241+01 | .40701309+00 | .12103704+01 | .75778633+00 |
| .55981040+00 | .17091285+01 | .40661711+00 | .12125716+01 | .75990094+00 |
| .56024663+00 | .17092336+01 | .40622079+00 | .12147881+01 | .76202825+00 |
| .56068286+00 | .17093393+01 | .40582410+00 | .12170202+01 | .76416842+00 |
| .56111909+00 | .17094457+01 | .40542705+00 | .12192680+01 | .76632165+00 |
| .56155533+00 | .17095528+01 | .40502963+00 | .12215318+01 | .76848805+00 |
| .56199156+00 | .17096606+01 | .40463182+00 | .12238117+01 | .77066775+00 |
| .56242779+00 | .17097691+01 | .40423361+00 | .12261030+01 | .77286091+00 |
| .56286402+00 | .17098785+01 | .40383500+00 | .12284042+01 | .77506718+00 |

$$.49589692+01 = \Delta S/R$$

$$.29094914+03 = P_s/P_{\infty}$$

$$.41378396+01 = \rho_s/\rho_{\infty}$$

$$.70314264+02 = T_s/T_{\infty}$$

TABLE 213. CONICAL FLOWFIELD  $\theta_s = 27.5 \text{ DEG}$ ;  $M_\infty = 30.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .85017319+00 | .29999961+02 | .47996553+00 | .56236093+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .47996553+00 | .17003145+01 | .47996553+00 | .96049106+00 | .50000000+00 |
| .48258353+00 | .17003261+01 | .47736047+00 | .96581214+00 | .50598804+00 |
| .48520152+00 | .17003604+01 | .47478032+00 | .97126117+00 | .51208790+00 |
| .48781951+00 | .17004170+01 | .47222372+00 | .97684284+00 | .51830357+00 |
| .49043750+00 | .17004954+01 | .46968936+00 | .98256212+00 | .52463929+00 |
| .49305550+00 | .17005951+01 | .46717596+00 | .98842431+00 | .53109951+00 |
| .49567349+00 | .17007157+01 | .46468230+00 | .99443501+00 | .53768897+00 |
| .49829148+00 | .17008570+01 | .46220715+00 | .10006001+01 | .54441264+00 |
| .50090946+00 | .17010186+01 | .45974935+00 | .10069259+01 | .55127575+00 |
| .50309110+00 | .17011686+01 | .45771360+00 | .10123248+01 | .55710553+00 |
| .50527275+00 | .17013323+01 | .45568845+00 | .10178440+01 | .56303945+00 |
| .50745439+00 | .17015097+01 | .45367326+00 | .10234878+01 | .56908108+00 |
| .50963603+00 | .17017006+01 | .45166738+00 | .10292606+01 | .57523416+00 |
| .51181767+00 | .17019051+01 | .44967018+00 | .10351673+01 | .58150265+00 |
| .51399931+00 | .17021229+01 | .44768104+00 | .10412127+01 | .58789072+00 |
| .51618095+00 | .17023540+01 | .44569933+00 | .10474024+01 | .59440278+00 |
| .51836260+00 | .17025984+01 | .44372442+00 | .10537418+01 | .60104341+00 |
| .52010791+00 | .17028035+01 | .44214896+00 | .10589250+01 | .60645179+00 |
| .52185322+00 | .17030171+01 | .44057714+00 | .10642111+01 | .61194821+00 |
| .52359854+00 | .17032392+01 | .43900862+00 | .10696033+01 | .61753541+00 |
| .52534385+00 | .17034698+01 | .43744308+00 | .10751051+01 | .62321627+00 |
| .52708916+00 | .17037089+01 | .43588019+00 | .10807204+01 | .62899385+00 |
| .52883448+00 | .17039565+01 | .43431962+00 | .10864527+01 | .63487127+00 |
| .53057979+00 | .17042128+01 | .43276103+00 | .10923063+01 | .64085181+00 |
| .53232510+00 | .17044776+01 | .43120408+00 | .10982854+01 | .64693905+00 |
| .53363409+00 | .17046819+01 | .43003723+00 | .11028548+01 | .65157663+00 |
| .53494307+00 | .17048912+01 | .42887097+00 | .11074993+01 | .65627790+00 |
| .53625206+00 | .17051053+01 | .42770514+00 | .11122210+01 | .66104450+00 |
| .53756104+00 | .17053244+01 | .42653958+00 | .11170219+01 | .66587812+00 |
| .53887003+00 | .17055485+01 | .42537415+00 | .11219044+01 | .67078068+00 |
| .54017901+00 | .17057776+01 | .42420868+00 | .11268708+01 | .67575396+00 |
| .54148800+00 | .17060118+01 | .42304301+00 | .11319235+01 | .68080000+00 |
| .54279698+00 | .17062510+01 | .42187697+00 | .11370649+01 | .68592075+00 |
| .54366965+00 | .17064134+01 | .42109934+00 | .11405431+01 | .68937714+00 |
| .54454230+00 | .17065780+01 | .42032142+00 | .11440629+01 | .69286841+00 |
| .54541476+00 | .17067454+01 | .41954302+00 | .11476241+01 | .69639438+00 |
| .54628722+00 | .17069150+01 | .41876423+00 | .11512284+01 | .69995652+00 |
| .54715969+00 | .17070870+01 | .41798500+00 | .11548768+01 | .70355557+00 |
| .54803215+00 | .17072614+01 | .41720528+00 | .11585701+01 | .70719222+00 |
| .54890461+00 | .17074381+01 | .41642500+00 | .11623093+01 | .71086726+00 |



TABLE 213. (Concluded)

$M_{\infty} = .29999961+02$

$\Theta_s = .47996553+00$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .54977708+00 | .17076173+01 | .41564412+00 | .11660953+01 | .71458147+00 |
| .55021331+00 | .17077077+01 | .41525345+00 | .11680062+01 | .71645350+00 |
| .55064954+00 | .17077988+01 | .41486258+00 | .11699291+01 | .71833561+00 |
| .55108577+00 | .17078905+01 | .41447154+00 | .11718643+01 | .72022792+00 |
| .55152200+00 | .17079828+01 | .41408032+00 | .11738119+01 | .72213057+00 |
| .55195823+00 | .17080757+01 | .41368890+00 | .11757719+01 | .72404358+00 |
| .55239446+00 | .17081693+01 | .41329728+00 | .11777445+01 | .72596709+00 |
| .55283070+00 | .17082634+01 | .41290544+00 | .11797298+01 | .72790126+00 |
| .55326693+00 | .17083582+01 | .41251339+00 | .11817282+01 | .72984619+00 |
| .55370316+00 | .17084536+01 | .41212112+00 | .11837395+01 | .73180191+00 |
| .55413939+00 | .17085496+01 | .41172861+00 | .11857640+01 | .73376864+00 |
| .55457562+00 | .17086463+01 | .41133586+00 | .11878018+01 | .73574645+00 |
| .55501185+00 | .17087436+01 | .41094286+00 | .11898531+01 | .73773547+00 |
| .55544809+00 | .17088415+01 | .41054960+00 | .11919181+01 | .73973584+00 |
| .55588432+00 | .17089401+01 | .41015609+00 | .11939968+01 | .74174763+00 |
| .55632055+00 | .17090393+01 | .40976229+00 | .11960895+01 | .74377099+00 |
| .55675678+00 | .17091392+01 | .40936823+00 | .11981963+01 | .74580607+00 |
| .55719301+00 | .17092397+01 | .40897387+00 | .12003173+01 | .74785298+00 |
| .55762924+00 | .17093409+01 | .40857922+00 | .12024528+01 | .74991184+00 |
| .55806547+00 | .17094427+01 | .40818427+00 | .12046029+01 | .75198285+00 |
| .55850171+00 | .17095452+01 | .40778899+00 | .12067678+01 | .75406607+00 |
| .55893794+00 | .17096483+01 | .40739340+00 | .12089476+01 | .75616163+00 |
| .55937417+00 | .17097522+01 | .40699746+00 | .12111425+01 | .75826973+00 |
| .55981040+00 | .17098566+01 | .40660118+00 | .12133528+01 | .76039053+00 |
| .56024663+00 | .17099618+01 | .40620456+00 | .12155786+01 | .76252413+00 |
| .56068286+00 | .17100677+01 | .40580757+00 | .12178200+01 | .76467066+00 |
| .56111909+00 | .17101742+01 | .40541022+00 | .12200773+01 | .76683030+00 |
| .56155533+00 | .17102814+01 | .40501247+00 | .12223507+01 | .76900321+00 |
| .56199156+00 | .17103893+01 | .40461435+00 | .12246403+01 | .77118952+00 |
| .56236093+00 | .17104813+01 | .40427693+00 | .12265919+01 | .77305136+00 |

$.52136511+01 = \Delta S/R$

$.34599375+03 = P_s/P_{\infty}$

$.41464778+01 = \rho_s/\rho_{\infty}$

$.83442810+02 = T_s/T_{\infty}$

TABLE 214. CONICAL FLOWFIELD  $\theta_s = 30.0$  DEG;  $M_\infty = 1.8171784$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .50000938+00 | .18171784+01 | .52359876+00 | .94702104+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .52359876+00 | .10000000+01 | .52359876+00 | .86602539+00 | .50000000+00 |
| .53756127+00 | .10001876+01 | .50996399+00 | .85926109+00 | .51222224+00 |
| .55152377+00 | .10007223+01 | .49694861+00 | .85291186+00 | .52471454+00 |
| .56548628+00 | .10015677+01 | .48450220+00 | .84695300+00 | .53749223+00 |
| .57944879+00 | .10026928+01 | .47257955+00 | .84136419+00 | .55057266+00 |
| .59341130+00 | .10040715+01 | .46113991+00 | .83612887+00 | .56397524+00 |
| .60606482+00 | .10055213+01 | .45115901+00 | .83167885+00 | .57641783+00 |
| .61871834+00 | .10071469+01 | .44151937+00 | .82750092+00 | .58916070+00 |
| .63137186+00 | .10089362+01 | .43219785+00 | .82358962+00 | .60222354+00 |
| .64402539+00 | .10108787+01 | .42317310+00 | .81994118+00 | .61562782+00 |
| .65667891+00 | .10129658+01 | .41442528+00 | .81655364+00 | .62939714+00 |
| .66802344+00 | .10149535+01 | .40680273+00 | .81373821+00 | .64207364+00 |
| .67936798+00 | .10170469+01 | .39937545+00 | .81113344+00 | .65508481+00 |
| .69071252+00 | .10192420+01 | .39213167+00 | .80874172+00 | .66845307+00 |
| .70205706+00 | .10215357+01 | .38506029+00 | .80656664+00 | .68220286+00 |
| .71340159+00 | .10239256+01 | .37815064+00 | .80461322+00 | .69636110+00 |
| .72343715+00 | .10261185+01 | .37216499+00 | .80307488+00 | .70924961+00 |
| .73347270+00 | .10283843+01 | .36629133+00 | .80172016+00 | .72250294+00 |
| .74350825+00 | .10307225+01 | .36052310+00 | .80055548+00 | .73614551+00 |
| .75354380+00 | .10331329+01 | .35485405+00 | .79958843+00 | .75020406+00 |
| .76357935+00 | .10356157+01 | .34927806+00 | .79882776+00 | .76470786+00 |
| .77230592+00 | .10378340+01 | .34450031+00 | .79834192+00 | .77770671+00 |
| .78103249+00 | .10401080+01 | .33978452+00 | .79802752+00 | .79108940+00 |
| .78975905+00 | .10424385+01 | .33512679+00 | .79789333+00 | .80488290+00 |
| .79848562+00 | .10448265+01 | .33052338+00 | .79794803+00 | .81911245+00 |
| .80721219+00 | .10472734+01 | .32597044+00 | .79820425+00 | .83381071+00 |
| .81462977+00 | .10494007+01 | .32213728+00 | .79858931+00 | .84669739+00 |
| .82204735+00 | .10515727+01 | .31833547+00 | .79913714+00 | .85996927+00 |
| .82946493+00 | .10537907+01 | .31456263+00 | .79985730+00 | .87365118+00 |
| .83688252+00 | .10560561+01 | .31081629+00 | .80076042+00 | .88777021+00 |
| .84430010+00 | .10583706+01 | .30709393+00 | .80185841+00 | .90235019+00 |
| .85040870+00 | .10603148+01 | .30404466+00 | .80291829+00 | .91474167+00 |
| .85651729+00 | .10622946+01 | .30100846+00 | .80412751+00 | .92748643+00 |
| .86262589+00 | .10643113+01 | .29798381+00 | .80549508+00 | .94061165+00 |
| .86873449+00 | .10663663+01 | .29496907+00 | .80703109+00 | .95414144+00 |
| .87484308+00 | .10684612+01 | .29196266+00 | .80874652+00 | .96810177+00 |
| .87964270+00 | .10701362+01 | .28960517+00 | .81022817+00 | .97939114+00 |
| .88444231+00 | .10718377+01 | .28725086+00 | .81183460+00 | .99097888+00 |
| .88924192+00 | .10735666+01 | .28489884+00 | .81357288+00 | .10028812+01 |
| .89404153+00 | .10753241+01 | .28254812+00 | .81545071+00 | .10151158+01 |



TABLE 214. (Concluded)

| $M_{\infty} = .18171764+01$ |              |              | $\Theta_s = .52359876+00$ |                 |
|-----------------------------|--------------|--------------|---------------------------|-----------------|
| $\Theta$                    | $M_1^*$      | $\psi_1$     | $\underline{x}$           | $\underline{r}$ |
| .89884114+00                | .10771112+01 | .28019772+00 | .81747662+00              | .10277017+01    |
| .90233177+00                | .10784303+01 | .27848774+00 | .81904816+00              | .10370875+01    |
| .90582240+00                | .10797662+01 | .27677733+00 | .82070670+00              | .10466785+01    |
| .90931302+00                | .10811194+01 | .27506544+00 | .82245630+00              | .10564840+01    |
| .91280365+00                | .10824907+01 | .27335181+00 | .82430139+00              | .10665135+01    |
| .91629428+00                | .10838804+01 | .27163595+00 | .82624672+00              | .10767777+01    |
| .91847592+00                | .10847587+01 | .27056219+00 | .82751570+00              | .10833168+01    |
| .92065756+00                | .10856447+01 | .26948723+00 | .82882717+00              | .10899549+01    |
| .92283920+00                | .10865386+01 | .26841093+00 | .83018248+00              | .10966947+01    |
| .92502084+00                | .10874404+01 | .26733316+00 | .83158310+00              | .11035396+01    |
| .92720249+00                | .10883505+01 | .26625375+00 | .83303052+00              | .11104928+01    |
| .92938413+00                | .10892690+01 | .26517259+00 | .83452635+00              | .11175577+01    |
| .93156567+00                | .10901962+01 | .26408951+00 | .83607224+00              | .11247377+01    |
| .93374683+00                | .10911322+01 | .26300442+00 | .83766973+00              | .11320354+01    |
| .93592799+00                | .10920774+01 | .26191704+00 | .83932095+00              | .11394563+01    |
| .93810914+00                | .10930318+01 | .26082725+00 | .84102786+00              | .11470045+01    |
| .94029030+00                | .10939958+01 | .25973483+00 | .84279255+00              | .11546843+01    |
| .94247146+00                | .10949697+01 | .25863962+00 | .84461721+00              | .11625004+01    |
| .94465262+00                | .10959536+01 | .25754141+00 | .84650416+00              | .11704577+01    |
| .94683377+00                | .10969480+01 | .25643976+00 | .84845582+00              | .11785612+01    |
| .94702104+00                | .10970338+01 | .25634526+00 | .84862648+00              | .11792639+01    |

$$.56906700-01 = \Delta S/R$$

$$.29434415+01 = P_s/P_{\infty}$$

$$.18681925+01 = \rho_s/\rho_{\infty}$$

$$.15755558+01 = T_s/T_{\infty}$$

TABLE 215. CONICAL FLOWFIELD  $\theta_s = 30.0$  DEG;  $M_\infty = 2.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .54214813+00 | .19999921+01 | .52359876+00 | .88061410+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .52359876+00 | .10842759+01 | .52359876+00 | .86602539+00 | .50000000+00 |
| .53407064+00 | .10843915+01 | .51331215+00 | .86536919+00 | .51177778+00 |
| .54454252+00 | .10847251+01 | .50337937+00 | .86483012+00 | .52375948+00 |
| .55501440+00 | .10852589+01 | .49377646+00 | .86441451+00 | .53595933+00 |
| .56548628+00 | .10859776+01 | .48448154+00 | .86412880+00 | .54839232+00 |
| .57595816+00 | .10868680+01 | .47547449+00 | .86397997+00 | .56107454+00 |
| .58555739+00 | .10878248+01 | .46745505+00 | .86397005+00 | .57293346+00 |
| .59515661+00 | .10889080+01 | .45964867+00 | .86408699+00 | .58503002+00 |
| .60475583+00 | .10901105+01 | .45204293+00 | .86433748+00 | .59737942+00 |
| .61435506+00 | .10914262+01 | .44462624+00 | .86472843+00 | .60999770+00 |
| .62395428+00 | .10928497+01 | .43738770+00 | .86526718+00 | .62290201+00 |
| .63268085+00 | .10942332+01 | .43095314+00 | .86589196+00 | .63489690+00 |
| .64140742+00 | .10956989+01 | .42464995+00 | .86665202+00 | .64715828+00 |
| .65013398+00 | .10972439+01 | .41847118+00 | .86755449+00 | .65970217+00 |
| .65886055+00 | .10988660+01 | .41241011+00 | .86860701+00 | .67254567+00 |
| .66758712+00 | .11005632+01 | .40646044+00 | .86981783+00 | .68570721+00 |
| .67544103+00 | .11021535+01 | .40119584+00 | .87105044+00 | .69784099+00 |
| .68329494+00 | .11038024+01 | .39601209+00 | .87242579+00 | .71026412+00 |
| .69114885+00 | .11055091+01 | .39090502+00 | .87395176+00 | .72299350+00 |
| .69900276+00 | .11072732+01 | .38587052+00 | .87563681+00 | .73604722+00 |
| .70685667+00 | .11090942+01 | .38090458+00 | .87749022+00 | .74944489+00 |
| .71383792+00 | .11107606+01 | .37654477+00 | .87928720+00 | .76165977+00 |
| .72081918+00 | .11124718+01 | .37223336+00 | .88123294+00 | .77417923+00 |
| .72780043+00 | .11142282+01 | .36796764+00 | .88333584+00 | .78702056+00 |
| .73478168+00 | .11160301+01 | .36374491+00 | .88560513+00 | .80020252+00 |
| .74176294+00 | .11178777+01 | .35956255+00 | .88805069+00 | .81374527+00 |
| .74787153+00 | .11195325+01 | .35593404+00 | .89034382+00 | .82590839+00 |
| .75398013+00 | .11212233+01 | .35233261+00 | .89278822+00 | .83838038+00 |
| .76008873+00 | .11229507+01 | .34875650+00 | .89539263+00 | .85117845+00 |
| .76619732+00 | .11247154+01 | .34520398+00 | .89816645+00 | .86432105+00 |
| .77230592+00 | .11265182+01 | .34167291+00 | .90111985+00 | .87782809+00 |
| .77754186+00 | .11280944+01 | .33866220+00 | .90380277+00 | .88971207+00 |
| .78277780+00 | .11296999+01 | .33566485+00 | .90663357+00 | .90189455+00 |
| .78801374+00 | .11313353+01 | .33267958+00 | .90962045+00 | .91439129+00 |
| .79324968+00 | .11330015+01 | .32970519+00 | .91277244+00 | .92721946+00 |
| .79848562+00 | .11346992+01 | .32674035+00 | .91609938+00 | .94039759+00 |
| .80284891+00 | .11361388+01 | .32427598+00 | .91901304+00 | .95166100+00 |
| .80721219+00 | .11376016+01 | .32181650+00 | .92206217+00 | .96319371+00 |
| .81157547+00 | .11390883+01 | .31936113+00 | .92525397+00 | .97500910+00 |
| .81593876+00 | .11405994+01 | .31690896+00 | .92859610+00 | .98712143+00 |



TABLE 215. (Concluded)

$$M_{\infty} = .19999921+01$$

$$\Theta_s = .52359876+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .82030204+00 | .11421359+01 | .31445909+00 | .93209692+00 | .99954614+00 |
| .82379267+00 | .11433839+01 | .31250024+00 | .93501794+00 | .10097219+01 |
| .82728329+00 | .11446490+01 | .31054179+00 | .93805131+00 | .10201174+01 |
| .83077392+00 | .11459317+01 | .30858322+00 | .94120231+00 | .10307422+01 |
| .83426455+00 | .11472327+01 | .30662400+00 | .94447667+00 | .10416067+01 |
| .83775517+00 | .11485523+01 | .30466355+00 | .94788050+00 | .10527219+01 |
| .84037314+00 | .11495547+01 | .30319206+00 | .95052227+00 | .10612298+01 |
| .84299111+00 | .11505682+01 | .30171930+00 | .95324349+00 | .10698908+01 |
| .84560908+00 | .11515932+01 | .30024501+00 | .95604724+00 | .10787101+01 |
| .84822705+00 | .11526298+01 | .29876892+00 | .95893682+00 | .10876938+01 |
| .85084502+00 | .11536784+01 | .29729071+00 | .96191576+00 | .10968481+01 |
| .85259034+00 | .11543844+01 | .29630391+00 | .96395315+00 | .11030489+01 |
| .85433565+00 | .11550959+01 | .29531597+00 | .96603302+00 | .11093304+01 |
| .85608087+00 | .11558131+01 | .29432678+00 | .96815642+00 | .11156944+01 |
| .85782579+00 | .11565363+01 | .29333626+00 | .97032438+00 | .11221423+01 |
| .85957072+00 | .11572653+01 | .29234432+00 | .97253852+00 | .11286775+01 |
| .86131565+00 | .11580003+01 | .29135078+00 | .97480024+00 | .11353024+01 |
| .86306057+00 | .11587416+01 | .29035560+00 | .97711093+00 | .11420194+01 |
| .86480550+00 | .11594891+01 | .28935866+00 | .97947202+00 | .11488310+01 |
| .86655042+00 | .11602430+01 | .28835981+00 | .98188510+00 | .11557400+01 |
| .86829535+00 | .11610034+01 | .28735898+00 | .98435174+00 | .11627492+01 |
| .87004028+00 | .11617706+01 | .28635602+00 | .98687362+00 | .11698614+01 |
| .87178520+00 | .11625446+01 | .28535078+00 | .98945248+00 | .11770797+01 |
| .87353013+00 | .11633256+01 | .28434319+00 | .99209018+00 | .11844074+01 |
| .87527505+00 | .11641137+01 | .28333306+00 | .99478864+00 | .11918476+01 |
| .87701998+00 | .11649092+01 | .28232030+00 | .99754991+00 | .11994039+01 |
| .87876491+00 | .11657122+01 | .28130471+00 | .10003760+01 | .12070800+01 |
| .88050983+00 | .11665229+01 | .28028616+00 | .10032693+01 | .12148796+01 |
| .88061410+00 | .11665716+01 | .28022521+00 | .10034443+01 | .12153496+01 |

$$.76786608-01 = \Delta S/R$$

$$.32264983+01 = P_s/P_{\infty}$$

$$.19583628+01 = \rho_s/\rho_{\infty}$$

$$.16475488+01 = T_s/T_{\infty}$$

TABLE 216. CONICAL FLOWFIELD  $\theta_s = 30.0$  DEG;  $M_\infty = 2.5$ 

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .62142225+00 | .24999758+01 | .52359876+00 | .78066448+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .52359876+00 | .12428212+01 | .52359876+00 | .86602539+00 | .50000000+00 |
| .53101634+00 | .12428883+01 | .51627441+00 | .86842938+00 | .51001386+00 |
| .53843392+00 | .12430839+01 | .50912931+00 | .87096175+00 | .52022790+00 |
| .54585151+00 | .12434006+01 | .50215286+00 | .87362850+00 | .53045221+00 |
| .55326909+00 | .12438319+01 | .49533521+00 | .87643614+00 | .54129764+00 |
| .56068667+00 | .12443717+01 | .48866718+00 | .87939159+00 | .55217571+00 |
| .56810425+00 | .12450148+01 | .48214010+00 | .88250239+00 | .56329880+00 |
| .57552183+00 | .12457565+01 | .47574590+00 | .88577662+00 | .57468010+00 |
| .58206676+00 | .12464895+01 | .47020818+00 | .88880842+00 | .58494824+00 |
| .58861168+00 | .12472935+01 | .46476293+00 | .89198074+00 | .59543888+00 |
| .59515661+00 | .12481661+01 | .45940540+00 | .89530057+00 | .60616317+00 |
| .60170154+00 | .12491054+01 | .45413098+00 | .89877549+00 | .61713307+00 |
| .60824646+00 | .12501096+01 | .44893529+00 | .90241352+00 | .62836129+00 |
| .61479139+00 | .12511771+01 | .44381407+00 | .90622339+00 | .63986148+00 |
| .62133631+00 | .12523066+01 | .43876324+00 | .91021451+00 | .65164833+00 |
| .62700858+00 | .12533347+01 | .43443966+00 | .91382802+00 | .66210768+00 |
| .63268085+00 | .12544080+01 | .43016340+00 | .91759247+00 | .67280520+00 |
| .63835312+00 | .12555258+01 | .42593196+00 | .92151558+00 | .68375269+00 |
| .64402539+00 | .12566879+01 | .42174292+00 | .92560557+00 | .69496270+00 |
| .64969765+00 | .12578940+01 | .41759387+00 | .92987142+00 | .70644882+00 |
| .65536992+00 | .12591439+01 | .41348238+00 | .93432285+00 | .71822561+00 |
| .66104219+00 | .12604375+01 | .40940616+00 | .93897028+00 | .73030874+00 |
| .66664180+00 | .12615663+01 | .40598276+00 | .94306406+00 | .74078454+00 |
| .67064141+00 | .12627266+01 | .40258145+00 | .94731361+00 | .75150266+00 |
| .67544103+00 | .12639185+01 | .39920087+00 | .95172679+00 | .76247475+00 |
| .68024064+00 | .12651424+01 | .39583943+00 | .95631216+00 | .77371338+00 |
| .68504025+00 | .12663984+01 | .39249576+00 | .96107889+00 | .78523200+00 |
| .68983986+00 | .12676869+01 | .38916835+00 | .96603694+00 | .79704511+00 |
| .69463947+00 | .12690085+01 | .38585574+00 | .97119687+00 | .80916815+00 |
| .69856643+00 | .12701147+01 | .38315532+00 | .97557690+00 | .81932919+00 |
| .70247338+00 | .12712436+01 | .38046294+00 | .98010670+00 | .82971879+00 |
| .70642034+00 | .12723957+01 | .37777764+00 | .98479354+00 | .84034741+00 |
| .71034729+00 | .12735713+01 | .37509859+00 | .98964528+00 | .85122627+00 |
| .71427425+00 | .12747709+01 | .37242490+00 | .99467026+00 | .86236730+00 |
| .71820121+00 | .12759950+01 | .36975554+00 | .99987748+00 | .87378332+00 |
| .72212816+00 | .12772441+01 | .36708956+00 | .10052768+01 | .88548820+00 |
| .72518246+00 | .12782333+01 | .36501770+00 | .10096157+01 | .89480108+00 |
| .72823676+00 | .12792384+01 | .36294679+00 | .10140824+01 | .90430505+00 |
| .73129106+00 | .12802597+01 | .36087631+00 | .10186825+01 | .91400799+00 |
| .73434535+00 | .12812974+01 | .35880570+00 | .10234219+01 | .92391827+00 |



TABLE 216. (Concluded)

$$M_{\infty} = .24999758+01$$

$$\Theta_s = .52359876+00$$

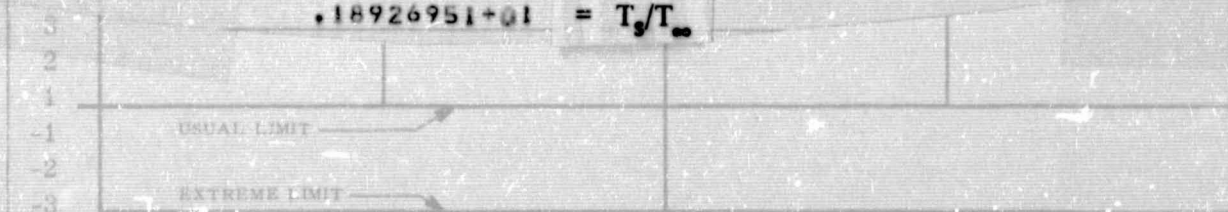
| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .73739965+00 | .12823520+01 | .35673445+00 | .10283073+01 | .93404487+00 |
| .74045395+00 | .12834240+01 | .35466196+00 | .10333451+01 | .94439712+00 |
| .74350825+00 | .12845137+01 | .35258765+00 | .10385428+01 | .95498516+00 |
| .74568989+00 | .12853032+01 | .35110456+00 | .10423577+01 | .96269846+00 |
| .74787153+00 | .12861022+01 | .34961997+00 | .10462611+01 | .97054171+00 |
| .75005308+00 | .12869110+01 | .34813372+00 | .10502560+01 | .97851890+00 |
| .75223424+00 | .12877302+01 | .34664559+00 | .10543454+01 | .98663304+00 |
| .75441539+00 | .12885595+01 | .34515518+00 | .10585332+01 | .99489199+00 |
| .75659655+00 | .12893991+01 | .34366229+00 | .10628233+01 | .10032991+01 |
| .75877771+00 | .12902492+01 | .34216662+00 | .10672195+01 | .10118604+01 |
| .76095886+00 | .12907645+01 | .34126776+00 | .10699099+01 | .10170734+01 |
| .76139510+00 | .12912837+01 | .34036771+00 | .10726409+01 | .10223452+01 |
| .76270379+00 | .12918070+01 | .33946645+00 | .10754135+01 | .10276770+01 |
| .76401249+00 | .12923343+01 | .33856389+00 | .10782288+01 | .10330703+01 |
| .76532118+00 | .12928658+01 | .33765996+00 | .10810876+01 | .10385264+01 |
| .76662987+00 | .12934014+01 | .33675455+00 | .10839912+01 | .10440468+01 |
| .76793857+00 | .12939413+01 | .33584762+00 | .10869406+01 | .10496330+01 |
| .76924726+00 | .12944856+01 | .33493911+00 | .10899369+01 | .10552865+01 |
| .77055596+00 | .12950342+01 | .33402891+00 | .10929814+01 | .10610090+01 |
| .77186465+00 | .12955873+01 | .33311694+00 | .10960752+01 | .10668021+01 |
| .77317335+00 | .12961451+01 | .33220316+00 | .10992197+01 | .10726675+01 |
| .77448204+00 | .12967074+01 | .33128741+00 | .11024163+01 | .10786070+01 |
| .77579074+00 | .12972744+01 | .33036969+00 | .11056662+01 | .10846225+01 |
| .77709943+00 | .12978463+01 | .32944987+00 | .11089709+01 | .10907159+01 |
| .77840813+00 | .12984231+01 | .32852784+00 | .11123320+01 | .10968892+01 |
| .77971682+00 | .12990049+01 | .32760352+00 | .11157510+01 | .11031445+01 |
| .78066448+00 | .12994294+01 | .32693271+00 | .11182638+01 | .11077265+01 |

$$.15769906+00 = \Delta S/R$$

$$.42091364+01 = P_s/P_{\infty}$$

$$.22238852+01 = \rho_s/\rho_{\infty}$$

$$.18926951+01 = T_s/T_{\infty}$$



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CLASSIFICATION

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71 TABLE 217. CONICAL FLOWFIELD  $\theta_s = 30.0 \text{ DEG}$ ;  $M_\infty = 3.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .67205568+00 | .29999927+01 | .52359876+00 | .72950835+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .52359876+00 | .13440862+01 | .52359876+00 | .86602539+00 | .50000000+00 |
| .52970736+00 | .13441355+01 | .51755343+00 | .86945274+00 | .50908541+00 |
| .53581595+00 | .13442802+01 | .51162997+00 | .87301567+00 | .51835861+00 |
| .54192455+00 | .13445157+01 | .50582143+00 | .87672030+00 | .52782833+00 |
| .54803315+00 | .13448379+01 | .50012129+00 | .88057335+00 | .53750397+00 |
| .55414174+00 | .13452432+01 | .49452341+00 | .88453199+00 | .54739558+00 |
| .56025034+00 | .13457282+01 | .48902199+00 | .88875382+00 | .55751378+00 |
| .56635894+00 | .13462900+01 | .48361152+00 | .89309724+00 | .56787010+00 |
| .57246754+00 | .13469260+01 | .47828677+00 | .89762111+00 | .57847673+00 |
| .57770348+00 | .13475284+01 | .47328713+00 | .90164957+00 | .58777730+00 |
| .58293742+00 | .13481824+01 | .46934376+00 | .90582424+00 | .59728030+00 |
| .58817536+00 | .13488868+01 | .46495374+00 | .91015198+00 | .60699511+00 |
| .59341130+00 | .13496404+01 | .46061420+00 | .91464032+00 | .61693181+00 |
| .59864724+00 | .13504426+01 | .45632240+00 | .91929729+00 | .62710115+00 |
| .60388318+00 | .13512925+01 | .45207563+00 | .92413152+00 | .63751461+00 |
| .60911912+00 | .13521895+01 | .44787123+00 | .92915226+00 | .64818449+00 |
| .61435506+00 | .13531331+01 | .44370661+00 | .93436953+00 | .65912401+00 |
| .61871834+00 | .13539547+01 | .44026463+00 | .93887515+00 | .66845647+00 |
| .62308162+00 | .13548083+01 | .43684699+00 | .94353140+00 | .67799477+00 |
| .62744491+00 | .13556937+01 | .43345229+00 | .94834554+00 | .68774833+00 |
| .63180819+00 | .13566109+01 | .43007901+00 | .95332526+00 | .69772715+00 |
| .63617148+00 | .13575599+01 | .42672570+00 | .95847879+00 | .70794187+00 |
| .64053476+00 | .13585409+01 | .42339090+00 | .96381498+00 | .71840373+00 |
| .64489804+00 | .13595539+01 | .42007314+00 | .96934326+00 | .72912545+00 |
| .64926133+00 | .13605992+01 | .41677091+00 | .97507390+00 | .74011959+00 |
| .65275195+00 | .13614589+01 | .41413928+00 | .97981151+00 | .74912061+00 |
| .65624258+00 | .13623396+01 | .41151583+00 | .98469180+00 | .75831284+00 |
| .65973321+00 | .13632416+01 | .40889976+00 | .98972117+00 | .76770494+00 |
| .66322383+00 | .13641650+01 | .40629029+00 | .99490652+00 | .77730410+00 |
| .66671446+00 | .13651102+01 | .40368656+00 | .10002552+01 | .78712109+00 |
| .67020509+00 | .13660775+01 | .40108769+00 | .10057751+01 | .79716533+00 |
| .67369571+00 | .13670672+01 | .39849285+00 | .10114747+01 | .80744734+00 |
| .67718634+00 | .13680797+01 | .39590109+00 | .10173629+01 | .81797842+00 |
| .67980431+00 | .13688543+01 | .39339587+00 | .10219088+01 | .82604748+00 |
| .68242228+00 | .13696423+01 | .39201721+00 | .10265706+01 | .83426876+00 |
| .68504025+00 | .13704437+01 | .39007609+00 | .10313529+01 | .84264812+00 |
| .68765822+00 | .13712589+01 | .38813491+00 | .10362608+01 | .85119161+00 |
| .69027619+00 | .13720880+01 | .38619328+00 | .10412993+01 | .85990552+00 |
| .69289416+00 | .13729314+01 | .38425069+00 | .10464740+01 | .86879668+00 |
| .69551213+00 | .13737894+01 | .38230669+00 | .10517907+01 | .87787225+00 |

CLASSIFICATION

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C5



TABLE 217. (Concluded)

$$M_{\infty} = .29999927+01$$

$$\Theta_s = .52359876+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .69813010+00 | .13746622+01 | .38036085+00 | .10572556+01 | .88713985+00 |
| .69987532+00 | .13752527+01 | .37906227+00 | .10609842+01 | .89342856+00 |
| .70162024+00 | .13758505+01 | .37776235+00 | .10647831+01 | .89980759+00 |
| .70336517+00 | .13764552+01 | .37646107+00 | .10686550+01 | .90628067+00 |
| .70511010+00 | .13770670+01 | .37515823+00 | .10726022+01 | .91285058+00 |
| .70685502+00 | .13776861+01 | .37385363+00 | .10766270+01 | .91952008+00 |
| .70859995+00 | .13783125+01 | .37254717+00 | .10807318+01 | .92629217+00 |
| .71034487+00 | .13789463+01 | .37123858+00 | .10849193+01 | .93317001+00 |
| .71208980+00 | .13795877+01 | .36992776+00 | .10891922+01 | .94015683+00 |
| .71296226+00 | .13799113+01 | .36927143+00 | .10913615+01 | .94369219+00 |
| .71383473+00 | .13802369+01 | .36861444+00 | .10935533+01 | .94725611+00 |
| .71470719+00 | .13805645+01 | .36795679+00 | .10957678+01 | .95084901+00 |
| .71557965+00 | .13808941+01 | .36729847+00 | .10980055+01 | .95447135+00 |
| .71645211+00 | .13812256+01 | .36663940+00 | .11002669+01 | .95812366+00 |
| .71732458+00 | .13815592+01 | .36597960+00 | .11025521+01 | .96180637+00 |
| .71819704+00 | .13818948+01 | .36531901+00 | .11048618+01 | .96551999+00 |
| .71906950+00 | .13822326+01 | .36465763+00 | .11071963+01 | .96926507+00 |
| .71994177+00 | .13825724+01 | .36399540+00 | .11095560+01 | .97304206+00 |
| .72081443+00 | .13829144+01 | .36333234+00 | .11119415+01 | .97685157+00 |
| .72168689+00 | .13832585+01 | .36266837+00 | .11143531+01 | .98069409+00 |
| .72255936+00 | .13836048+01 | .36200348+00 | .11167914+01 | .98457022+00 |
| .72343182+00 | .13839533+01 | .36133762+00 | .11192567+01 | .98848052+00 |
| .72430428+00 | .13843040+01 | .36067078+00 | .11217497+01 | .99242557+00 |
| .72517674+00 | .13846570+01 | .36000297+00 | .11242708+01 | .99640597+00 |
| .72604921+00 | .13850123+01 | .35933409+00 | .11268205+01 | .10004224+01 |
| .72692167+00 | .13853698+01 | .35866413+00 | .11293994+01 | .10044754+01 |
| .72779413+00 | .13857297+01 | .35799306+00 | .11320080+01 | .10085658+01 |
| .72866660+00 | .13860919+01 | .35732090+00 | .11346470+01 | .10126941+01 |
| .72953906+00 | .13864565+01 | .35664756+00 | .11373169+01 | .10168611+01 |
| .72956835+00 | .13864688+01 | .35662494+00 | .11374071+01 | .10170017+01 |

$$.27033147+00 = \Delta S/R$$

$$.54373181+01 = P_s/P_{\infty}$$

$$.24789013+01 = \rho_s/\rho_{\infty}$$

$$.21934388+01 = T_s/T_{\infty}$$

EXTREMAL LIMIT

390

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CLASSIFICATION

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TABLE 218. CONICAL FLOWFIELD  $\theta_s = 30.0 \text{ DEG}$ ;  $M_\infty = 4.0$

| $u_s$         | $M_\infty$   | $\theta_s$   | $\theta_w$    |              |
|---------------|--------------|--------------|---------------|--------------|
| .73061465+00  | .39999863+01 | .52359876+00 | .67951018+00  |              |
| $\theta$      | $M_1^*$      | $\psi_1$     | $x$           | $r$          |
| .52359876+00  | .14612019+01 | .52359876+00 | .86602539+00  | .50000000+00 |
| .52796204+00  | .14612294+01 | .51926781+00 | .86979418+00  | .50724890+00 |
| .53232533+00  | .14613106+01 | .51499947+00 | .87367444+00  | .51463345+00 |
| .53668861+00  | .14614436+01 | .51079056+00 | .87767044+00  | .52215887+00 |
| .54105189+00  | .14616268+01 | .50663806+00 | .88178699+00  | .52983086+00 |
| .54541518+00  | .14618585+01 | .50253906+00 | .88602894+00  | .53765529+00 |
| .54977846+00  | .14621373+01 | .49849082+00 | .89040168+00  | .54563853+00 |
| .55370542+00  | .14624277+01 | .49468858+00 | .89445357+00  | .55296470+00 |
| .55763237+00  | .14627544+01 | .49132344+00 | .89862029+00  | .56043006+00 |
| .56155933+00  | .14631167+01 | .48779357+00 | .90290648+00  | .56804004+00 |
| .56548628+00  | .14635140+01 | .48429722+00 | .90731692+00  | .57580031+00 |
| .56941324+00  | .14639455+01 | .48083269+00 | .91185686+00  | .58371698+00 |
| .57334019+00  | .14644108+01 | .47739830+00 | .91653185+00  | .59179650+00 |
| .57683082+00  | .14648523+01 | .47436950+00 | .92080549+00  | .59912050+00 |
| .58032145+00  | .14653199+01 | .47136208+00 | .92519485+00  | .60658362+00 |
| .58381207+00  | .14658132+01 | .46837495+00 | .92970449+00  | .61419114+00 |
| .58730270+00  | .14663320+01 | .46540702+00 | .93433931+00  | .62194871+00 |
| .59079333+00  | .14668762+01 | .46245717+00 | .93910458+00  | .62986234+00 |
| .59428395+00  | .14674456+01 | .45952435+00 | .94400574+00  | .63793831+00 |
| .597733825+00 | .14679644+01 | .45697124+00 | .94841030+00  | .64514320+00 |
| .60039255+00  | .14685024+01 | .45442962+00 | .95292774+00  | .65248223+00 |
| .60344685+00  | .14690595+01 | .45189876+00 | .95756219+00  | .65996038+00 |
| .60650115+00  | .14696358+01 | .44937795+00 | .96231844+00  | .66758294+00 |
| .60955545+00  | .14702312+01 | .44686646+00 | .96720140+00  | .67535548+00 |
| .61266974+00  | .14708459+01 | .44436355+00 | .97221622+00  | .68328380+00 |
| .61522771+00  | .14713881+01 | .44222448+00 | .97662386+00  | .69020825+00 |
| .61784568+00  | .14719446+01 | .44009074+00 | .98113614+00  | .69725587+00 |
| .62046345+00  | .14725154+01 | .43796176+00 | .98575699+00  | .70443100+00 |
| .62308162+00  | .14731006+01 | .43583717+00 | .99049044+00  | .71173820+00 |
| .62569959+00  | .14737004+01 | .43371642+00 | .99534088+00  | .71918228+00 |
| .62831756+00  | .14743148+01 | .43159901+00 | .100003128+01 | .72676833+00 |
| .63099921+00  | .14748381+01 | .42983674+00 | .10045525+01  | .73320238+00 |
| .63268085+00  | .14753718+01 | .42807613+00 | .1008682+01   | .73974194+00 |
| .63486249+00  | .14759156+01 | .42631689+00 | .10133070+01  | .74639046+00 |
| .63704413+00  | .14764705+01 | .42455869+00 | .10176281+01  | .75315152+00 |
| .63922577+00  | .14770358+01 | .42280126+00 | .10224497+01  | .76002887+00 |
| .64140742+00  | .14776119+01 | .42104422+00 | .10271753+01  | .76702642+00 |
| .64315273+00  | .14780807+01 | .41963868+00 | .10310332+01  | .77271379+00 |
| .64489804+00  | .14785565+01 | .41823301+00 | .10349621+01  | .77848300+00 |
| .64664336+00  | .14790395+01 | .41682705+00 | .10389642+01  | .78433626+00 |

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TABLE 218. (Concluded)

$M_{\infty} = .39999863+01$

$\Theta_s = .52359876+00$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .64838867+00 | .14795298+01 | .41542059+00 | .10430416+01 | .79027607+00 |
| .65013398+00 | .14800273+01 | .41401346+00 | .10471967+01 | .79630492+00 |
| .65187930+00 | .14805323+01 | .41260546+00 | .10514318+01 | .80242538+00 |
| .65318818+00 | .14809162+01 | .41154876+00 | .10546619+01 | .80707720+00 |
| .65449688+00 | .14813046+01 | .41049126+00 | .10579392+01 | .81178261+00 |
| .65580557+00 | .14816974+01 | .40943301+00 | .10612651+01 | .81654350+00 |
| .65711427+00 | .14820945+01 | .40837388+00 | .10646409+01 | .82136118+00 |
| .65842296+00 | .14824961+01 | .40731384+00 | .10680678+01 | .82623697+00 |
| .65973166+00 | .14829021+01 | .40625271+00 | .10715470+01 | .83117226+00 |
| .66060412+00 | .14831753+01 | .40554466+00 | .10738963+01 | .83449617+00 |
| .66147658+00 | .14834506+01 | .40483612+00 | .10762698+01 | .83784762+00 |
| .66234905+00 | .14837278+01 | .40412700+00 | .10786680+01 | .84122699+00 |
| .66322151+00 | .14840072+01 | .40341726+00 | .10810913+01 | .84463478+00 |
| .66409397+00 | .14842886+01 | .40270690+00 | .10835401+01 | .84807143+00 |
| .66496643+00 | .14845722+01 | .40199589+00 | .10860149+01 | .85153744+00 |
| .66583890+00 | .14848578+01 | .40128420+00 | .10885162+01 | .85503326+00 |
| .66671136+00 | .14851456+01 | .40057179+00 | .10910443+01 | .85855940+00 |
| .66758382+00 | .14854356+01 | .39985862+00 | .10935999+01 | .86211644+00 |
| .66845629+00 | .14857278+01 | .39914466+00 | .10961833+01 | .86570479+00 |
| .66932875+00 | .14860221+01 | .39842989+00 | .10987950+01 | .86932506+00 |
| .67020121+00 | .14863187+01 | .39771426+00 | .11014357+01 | .87297780+00 |
| .67107368+00 | .14866175+01 | .39699775+00 | .11041058+01 | .87666357+00 |
| .67194614+00 | .14869187+01 | .39628030+00 | .11068059+01 | .88038298+00 |
| .67281860+00 | .14872221+01 | .39556190+00 | .11095365+01 | .88413660+00 |
| .67369106+00 | .14875278+01 | .39484251+00 | .11122983+01 | .88792507+00 |
| .67456353+00 | .14878359+01 | .39412206+00 | .11150917+01 | .89174896+00 |
| .67543599+00 | .14881464+01 | .39340057+00 | .11179175+01 | .89560898+00 |
| .67630845+00 | .14884592+01 | .39267792+00 | .11207763+01 | .89950582+00 |
| .67718092+00 | .14887745+01 | .39195414+00 | .11236687+01 | .90344014+00 |
| .67805338+00 | .14890923+01 | .39122913+00 | .11265953+01 | .90741263+00 |
| .67892584+00 | .14894125+01 | .39050291+00 | .11295569+01 | .91142402+00 |
| .67951018+00 | .14896284+01 | .39001580+00 | .11315604+01 | .91413280+00 |

$.55722639+00 = \Delta S/R$

$.85806569+01 = P_s/P_{\infty}$

$.29060165+01 = \rho_s/\rho_{\infty}$

$.29527214+01 = T_s/T_{\infty}$

TABLE 219. CONICAL FLOWFIELD  $\theta_s = 30.0$  DEG;  $M_\infty = 5.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .76137488+00 | .49999949+01 | .52359876+00 | .65632886+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .52359876+00 | .15227212+01 | .52359876+00 | .86602539+00 | .50000000+00 |
| .52708939+00 | .15227396+01 | .52012885+00 | .86967909+00 | .50616525+00 |
| .53058001+00 | .15227941+01 | .51669919+00 | .87342423+00 | .51243485+00 |
| .53407064+00 | .15228836+01 | .51330792+00 | .87726392+00 | .51881230+00 |
| .53756127+00 | .15230072+01 | .50995323+00 | .88120147+00 | .52530132+00 |
| .54105189+00 | .15231641+01 | .50663340+00 | .88524053+00 | .53190596+00 |
| .54454252+00 | .15233535+01 | .50334676+00 | .88938484+00 | .53863034+00 |
| .54803315+00 | .15235747+01 | .50009169+00 | .89363835+00 | .54547887+00 |
| .55152377+00 | .15238271+01 | .49686665+00 | .89800528+00 | .55245619+00 |
| .55501440+00 | .15241100+01 | .49367011+00 | .90249004+00 | .55956715+00 |
| .55850503+00 | .15244229+01 | .49050061+00 | .90709728+00 | .56681685+00 |
| .56199566+00 | .15247654+01 | .48735669+00 | .91183199+00 | .57421078+00 |
| .56548628+00 | .15251371+01 | .48423696+00 | .91669950+00 | .58175467+00 |
| .56897691+00 | .15255374+01 | .48114005+00 | .92170539+00 | .58945463+00 |
| .57246754+00 | .15259662+01 | .47806457+00 | .92685562+00 | .59731707+00 |
| .57595816+00 | .15264232+01 | .47500919+00 | .93215649+00 | .60534884+00 |
| .57857613+00 | .15267843+01 | .47273006+00 | .93623509+00 | .61148816+00 |
| .58119410+00 | .15271610+01 | .47046092+00 | .94040526+00 | .61773006+00 |
| .58381207+00 | .15275533+01 | .46820124+00 | .94467010+00 | .62407788+00 |
| .58643004+00 | .15279612+01 | .46595045+00 | .94903298+00 | .63053519+00 |
| .58904801+00 | .15283846+01 | .46370801+00 | .95349744+00 | .63710577+00 |
| .59166598+00 | .15288234+01 | .46147335+00 | .95806709+00 | .64379348+00 |
| .59428395+00 | .15292778+01 | .45924593+00 | .96274585+00 | .65060246+00 |
| .59690192+00 | .15297477+01 | .45702518+00 | .96753781+00 | .65753704+00 |
| .59951989+00 | .15302331+01 | .45481054+00 | .97244733+00 | .66460183+00 |
| .60213786+00 | .15307342+01 | .45260143+00 | .97747892+00 | .67180158+00 |
| .60475583+00 | .15312510+01 | .45039730+00 | .98263746+00 | .67914144+00 |
| .60737380+00 | .15317836+01 | .44819753+00 | .98792801+00 | .68662671+00 |
| .60999177+00 | .15323321+01 | .44600154+00 | .99335598+00 | .69426306+00 |
| .61260974+00 | .15328965+01 | .44380874+00 | .99892714+00 | .70205651+00 |
| .61522771+00 | .15334772+01 | .44161849+00 | .10046476+01 | .71001342+00 |
| .61697303+00 | .15338733+01 | .44015945+00 | .10085473+01 | .71541215+00 |
| .61871834+00 | .15342768+01 | .43870107+00 | .10125183+01 | .72088861+00 |
| .62046365+00 | .15346877+01 | .43724313+00 | .10165626+01 | .72644500+00 |
| .62220897+00 | .15351060+01 | .43578549+00 | .10206824+01 | .73208353+00 |
| .62395428+00 | .15355318+01 | .43432789+00 | .10248801+01 | .73780666+00 |
| .62569959+00 | .15359652+01 | .43287018+00 | .10291581+01 | .74361685+00 |
| .62744491+00 | .15364063+01 | .43141209+00 | .10335188+01 | .74951679+00 |
| .62919022+00 | .15368551+01 | .42995343+00 | .10379649+01 | .75550890+00 |
| .63093553+00 | .15373119+01 | .42849401+00 | .10424992+01 | .76159628+00 |

TABLE 219. (Concluded)

$$M_{\infty} = .49999949+01$$

$$\Theta_s = .52359876+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .63268075+00 | .15377767+01 | .42703350+00 | .10471241+01 | .76778139+00 |
| .63442568+00 | .15382501+01 | .42557159+00 | .10518424+01 | .77406673+00 |
| .63617060+00 | .15387317+01 | .42410819+00 | .10566579+01 | .78045647+00 |
| .63791553+00 | .15392216+01 | .42264307+00 | .10615738+01 | .78695402+00 |
| .63966046+00 | .15397199+01 | .42117593+00 | .10665937+01 | .79356299+00 |
| .64140538+00 | .15402267+01 | .41970651+00 | .10717214+01 | .80028710+00 |
| .64227784+00 | .15404834+01 | .41897087+00 | .10743268+01 | .80369356+00 |
| .64315031+00 | .15407423+01 | .41823455+00 | .10769605+01 | .80713023+00 |
| .64402277+00 | .15410034+01 | .41749754+00 | .10796233+01 | .81059777+00 |
| .64489523+00 | .15412667+01 | .41675980+00 | .10823154+01 | .81409665+00 |
| .64576770+00 | .15415323+01 | .41602123+00 | .10850375+01 | .81762736+00 |
| .64664016+00 | .15418002+01 | .41528188+00 | .10877901+01 | .82119055+00 |
| .64751262+00 | .15420704+01 | .41454167+00 | .10905739+01 | .82478678+00 |
| .64838509+00 | .15423428+01 | .41380058+00 | .10933893+01 | .82841662+00 |
| .64925755+00 | .15426176+01 | .41305851+00 | .10962371+01 | .83208072+00 |
| .65013001+00 | .15428948+01 | .41231549+00 | .10991178+01 | .83577965+00 |
| .65100247+00 | .15431744+01 | .41157144+00 | .11020320+01 | .83951411+00 |
| .65187494+00 | .15434564+01 | .41082636+00 | .11049805+01 | .84328475+00 |
| .65274740+00 | .15437409+01 | .41008015+00 | .11079639+01 | .84709226+00 |
| .65361986+00 | .15440278+01 | .40933280+00 | .11109829+01 | .85093738+00 |
| .65449233+00 | .15443172+01 | .40858424+00 | .11140383+01 | .85482076+00 |
| .65536479+00 | .15446092+01 | .40783443+00 | .11171307+01 | .85874317+00 |
| .65623725+00 | .15449037+01 | .40708335+00 | .11202610+01 | .86270539+00 |
| .65632846+00 | .15449348+01 | .40700440+00 | .11205919+01 | .86312376+00 |

$$.88121706+00 = \Delta S/R$$

$$.12627171+02 = P_s/P_{\infty}$$

$$.32187167+01 = \rho_s/\rho_{\infty}$$

$$.39230452+01 = T_s/T_{\infty}$$



TABLE 220. CONICAL FLOWFIELD  $\theta_s = 30.0$  DEG;  $M_\infty = 6.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .77926465+00 | .59999837+01 | .52359876+00 | .64368523+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .52359876+00 | .15585001+01 | .52359876+00 | .86602539+00 | .50000000+00 |
| .52752572+00 | .15585239+01 | .51969794+00 | .87061440+00 | .50721829+00 |
| .53145267+00 | .15585943+01 | .51584753+00 | .87533858+00 | .51458532+00 |
| .53537963+00 | .15587097+01 | .51204468+00 | .88020361+00 | .52210718+00 |
| .53930658+00 | .15588690+01 | .50828663+00 | .88521559+00 | .52979040+00 |
| .54323354+00 | .15590710+01 | .50457076+00 | .89038105+00 | .53764196+00 |
| .54716049+00 | .15593146+01 | .50089455+00 | .89570698+00 | .54566927+00 |
| .55065112+00 | .15595653+01 | .49765814+00 | .90058182+00 | .55295853+00 |
| .55414174+00 | .15598476+01 | .49444948+00 | .90559480+00 | .56039869+00 |
| .55763237+00 | .15601610+01 | .49126696+00 | .91075188+00 | .56799600+00 |
| .56112300+00 | .15605050+01 | .48810899+00 | .91605934+00 | .57575706+00 |
| .56461363+00 | .15608792+01 | .48497403+00 | .92152388+00 | .58368889+00 |
| .56810425+00 | .15612833+01 | .48186054+00 | .92715263+00 | .59179892+00 |
| .57115855+00 | .15616612+01 | .47915267+00 | .93221845+00 | .59904758+00 |
| .57421285+00 | .15620616+01 | .47645910+00 | .93742125+00 | .60644436+00 |
| .57726715+00 | .15624844+01 | .47377882+00 | .94276682+00 | .61399526+00 |
| .58032145+00 | .15629296+01 | .47111084+00 | .94826135+00 | .62170666+00 |
| .58337574+00 | .15633970+01 | .46845417+00 | .95391132+00 | .62958521+00 |
| .58643004+00 | .15638866+01 | .46580783+00 | .95972368+00 | .63763806+00 |
| .58904801+00 | .15643240+01 | .46354697+00 | .96484062+00 | .64468504+00 |
| .59166598+00 | .15647778+01 | .46129232+00 | .97008725+00 | .65167068+00 |
| .59428395+00 | .15652481+01 | .45904323+00 | .97546881+00 | .65920036+00 |
| .59690192+00 | .15657349+01 | .45679907+00 | .98099092+00 | .66667975+00 |
| .59951989+00 | .15662383+01 | .45455915+00 | .98665953+00 | .67431491+00 |
| .60213786+00 | .15667585+01 | .45232280+00 | .99248086+00 | .68211211+00 |
| .60431951+00 | .15672048+01 | .45046143+00 | .99745347+00 | .68873848+00 |
| .60650115+00 | .15676629+01 | .44860166+00 | .10025408+01 | .69548617+00 |
| .60868279+00 | .15681330+01 | .44674309+00 | .10077474+01 | .70235959+00 |
| .61084443+00 | .15686151+01 | .44488528+00 | .10130776+01 | .70936333+00 |
| .61301607+00 | .15691094+01 | .44302782+00 | .10185363+01 | .71650214+00 |
| .61522771+00 | .15696159+01 | .44117024+00 | .10241286+01 | .72378121+00 |
| .61697303+00 | .15700301+01 | .43968380+00 | .10287022+01 | .72970901+00 |
| .61871834+00 | .15704524+01 | .43819678+00 | .10333677+01 | .73573289+00 |
| .62046365+00 | .15708829+01 | .43670887+00 | .10381281+01 | .74185587+00 |
| .62220877+00 | .15713219+01 | .43521981+00 | .10429861+01 | .74808048+00 |
| .62395370+00 | .15717697+01 | .43372925+00 | .10479450+01 | .75441006+00 |
| .62569863+00 | .15722260+01 | .43223708+00 | .10530089+01 | .76084869+00 |
| .62700732+00 | .15725738+01 | .43111673+00 | .10568780+01 | .76575148+00 |
| .62831602+00 | .15729265+01 | .42999516+00 | .10608099+01 | .77071938+00 |
| .62962471+00 | .15732842+01 | .42887230+00 | .10648062+01 | .77575400+00 |

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TABLE 220. (Concluded)

$$M_{\infty} = .59999837+01$$

$$\Theta_s = .52359876+00$$

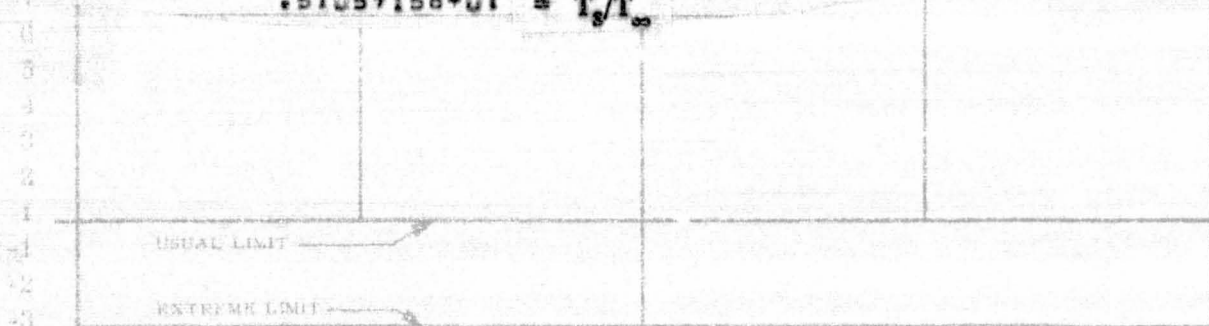
| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .63093340+00 | .15736469+01 | .42774802+00 | .10668688+01 | .78065705+00 |
| .63224210+00 | .15740147+01 | .42662212+00 | .10729995+01 | .78603047+00 |
| .63355079+00 | .15743876+01 | .42549455+00 | .10772003+01 | .79127608+00 |
| .63442326+00 | .15746392+01 | .42474183+00 | .10800407+01 | .79481422+00 |
| .63529572+00 | .15748930+01 | .42398825+00 | .10829137+01 | .79838594+00 |
| .63616818+00 | .15751493+01 | .42323376+00 | .10858200+01 | .80199184+00 |
| .63704064+00 | .15754079+01 | .42247836+00 | .10887602+01 | .80563250+00 |
| .63791311+00 | .15756689+01 | .42172194+00 | .10917350+01 | .80930870+00 |
| .63878557+00 | .15759324+01 | .42096448+00 | .10947450+01 | .81302100+00 |
| .63922180+00 | .15760650+01 | .42058536+00 | .10962635+01 | .81489092+00 |
| .63965803+00 | .15761983+01 | .42020596+00 | .10977910+01 | .81677010+00 |
| .64009427+00 | .15763322+01 | .41982627+00 | .10993277+01 | .81865870+00 |
| .64053050+00 | .15764667+01 | .41944632+00 | .11008737+01 | .82055678+00 |
| .64096673+00 | .15766018+01 | .41906604+00 | .11024290+01 | .82246447+00 |
| .64140296+00 | .15767377+01 | .41868548+00 | .11039938+01 | .82438176+00 |
| .64183919+00 | .15768741+01 | .41830461+00 | .11055682+01 | .82630883+00 |
| .64227542+00 | .15770112+01 | .41792344+00 | .11071522+01 | .82824571+00 |
| .64271165+00 | .15771488+01 | .41754195+00 | .11087460+01 | .83019260+00 |
| .64314789+00 | .15772872+01 | .41716012+00 | .11103496+01 | .83214953+00 |
| .64358412+00 | .15774262+01 | .41677798+00 | .11119632+01 | .83411662+00 |
| .64368523+00 | .15774585+01 | .41668935+00 | .11123386+01 | .83457399+00 |

$$.12094700+01 = \Delta S/R$$

$$.17573767+02 = P_s/P_{\infty}$$

$$.34418443+01 = \rho_s/\rho_{\infty}$$

$$.51059158+01 = T_s/T_{\infty}$$



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TABLE 221. CONICAL FLOWFIELD  $\theta_s = 30.0 \text{ DEG}$ ;  $M_\infty = 8.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .79797999+00 | .79999509+01 | .52359876+00 | .63105693+00 |              |
| $\theta$     | $M_1^*$      | $\phi_1$     | $x$          | $r$          |
| .52359876+00 | .15959300+01 | .52359876+00 | .86602539+00 | .50000000+00 |
| .52752572+00 | .15959544+01 | .51969789+00 | .87115741+00 | .50753465+00 |
| .53145267+00 | .15960265+01 | .51584715+00 | .87644847+00 | .51523779+00 |
| .53537963+00 | .15961447+01 | .51204338+00 | .88190580+00 | .52311686+00 |
| .53930650+00 | .15963079+01 | .50828360+00 | .88753718+00 | .53117985+00 |
| .54323354+00 | .15965149+01 | .50456493+00 | .89335088+00 | .53943524+00 |
| .54672416+00 | .15967349+01 | .50129170+00 | .89867896+00 | .54694231+00 |
| .55021479+00 | .15969880+01 | .49804688+00 | .90416490+00 | .55461544+00 |
| .55370542+00 | .15972737+01 | .49482862+00 | .90981586+00 | .56246191+00 |
| .55719604+00 | .15975915+01 | .49163514+00 | .91563948+00 | .57048943+00 |
| .56068667+00 | .15979411+01 | .48846468+00 | .92164395+00 | .57870623+00 |
| .56374097+00 | .15982728+01 | .48570806+00 | .92705301+00 | .58605807+00 |
| .56679527+00 | .15986282+01 | .48296658+00 | .93261351+00 | .59356786+00 |
| .56984957+00 | .15990074+01 | .48023912+00 | .93833201+00 | .60124216+00 |
| .57290386+00 | .15994101+01 | .47752453+00 | .94421572+00 | .60908815+00 |
| .57595816+00 | .15998363+01 | .47482169+00 | .95027221+00 | .61711331+00 |
| .57857613+00 | .16002204+01 | .47251345+00 | .95560707+00 | .62414069+00 |
| .58119410+00 | .16006216+01 | .47021230+00 | .96108023+00 | .63131096+00 |
| .58381207+00 | .16010402+01 | .46791749+00 | .96669745+00 | .63862982+00 |
| .58643004+00 | .16014761+01 | .46562830+00 | .97240482+00 | .64610324+00 |
| .58904801+00 | .16019294+01 | .46334399+00 | .97838887+00 | .65373767+00 |
| .59122965+00 | .16023205+01 | .46144359+00 | .98345019+00 | .66022750+00 |
| .59341130+00 | .16027238+01 | .45954560+00 | .98862931+00 | .66683795+00 |
| .59559294+00 | .16031395+01 | .45764958+00 | .99393076+00 | .67357340+00 |
| .59777458+00 | .16035675+01 | .45575508+00 | .99935923+00 | .68043845+00 |
| .59995622+00 | .16040080+01 | .45386162+00 | .10049197+01 | .68743797+00 |
| .60170154+00 | .16043696+01 | .45234727+00 | .10094667+01 | .69313785+00 |
| .60344685+00 | .16047392+01 | .45083304+00 | .10141045+01 | .69892984+00 |
| .60519216+00 | .16051172+01 | .44931865+00 | .10188359+01 | .70481680+00 |
| .60693748+00 | .16055034+01 | .44780386+00 | .10236643+01 | .71080186+00 |
| .60868279+00 | .16058981+01 | .44628839+00 | .10285929+01 | .71688811+00 |
| .60999177+00 | .16061996+01 | .44515117+00 | .10323571+01 | .72152122+00 |
| .61130057+00 | .16065063+01 | .44401319+00 | .10361806+01 | .72621389+00 |
| .61260926+00 | .16068181+01 | .44287438+00 | .10400651+01 | .73096797+00 |
| .61391795+00 | .16071347+01 | .44173466+00 | .10440128+01 | .73578544+00 |
| .61522665+00 | .16074564+01 | .44059394+00 | .10480251+01 | .74066787+00 |
| .61609911+00 | .16076736+01 | .43983278+00 | .10507368+01 | .74395974+00 |
| .61697157+00 | .16078931+01 | .43907110+00 | .10534785+01 | .74728176+00 |
| .61784404+00 | .16081148+01 | .43830882+00 | .10562510+01 | .75063450+00 |
| .61871650+00 | .16083389+01 | .43754587+00 | .10590547+01 | .75401849+00 |

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TABLE 221. (Concluded)

$$M_{\infty} = .79999509+01$$

$$\Theta_s = .52359876+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .61958896+00 | .16085652+01 | .43678226+00 | .10618903+01 | .75743428+00 |
| .62002520+00 | .16086793+01 | .43690020+00 | .10633202+01 | .75915428+00 |
| .62046143+00 | .16087939+01 | .43691792+00 | .10647583+01 | .76088247+00 |
| .62089766+00 | .16089091+01 | .43563551+00 | .10662046+01 | .76261888+00 |
| .62133389+00 | .16090249+01 | .43525283+00 | .10676594+01 | .76436365+00 |
| .62177012+00 | .16091413+01 | .43487000+00 | .10691225+01 | .76611678+00 |
| .62220635+00 | .16092583+01 | .43448695+00 | .10705941+01 | .76787837+00 |
| .62264258+00 | .16093758+01 | .43410370+00 | .10720743+01 | .76964855+00 |
| .62307882+00 | .16094940+01 | .43372021+00 | .10735632+01 | .77142731+00 |
| .62351505+00 | .16096128+01 | .43333648+00 | .10750609+01 | .77321488+00 |
| .62395128+00 | .16097322+01 | .43295254+00 | .10765674+01 | .77501117+00 |
| .62438751+00 | .16098522+01 | .43256836+00 | .10780828+01 | .77681638+00 |
| .62482374+00 | .16099728+01 | .43218397+00 | .10796073+01 | .77863057+00 |
| .62525997+00 | .16100941+01 | .43179929+00 | .10811409+01 | .78045380+00 |
| .62569620+00 | .16102159+01 | .43141437+00 | .10826837+01 | .78227614+00 |
| .62613244+00 | .16103384+01 | .43102918+00 | .10842358+01 | .78412774+00 |
| .62656867+00 | .16104615+01 | .43064372+00 | .10857973+01 | .78597866+00 |
| .62700490+00 | .16105852+01 | .43025801+00 | .10873683+01 | .78783896+00 |
| .62744113+00 | .16107095+01 | .42987202+00 | .10889489+01 | .78970879+00 |
| .62787736+00 | .16108345+01 | .42948572+00 | .10905391+01 | .79158821+00 |
| .62831359+00 | .16109601+01 | .42909912+00 | .10921392+01 | .79347735+00 |
| .62874983+00 | .16110864+01 | .42871227+00 | .10937492+01 | .79537624+00 |
| .62918606+00 | .16112133+01 | .42832509+00 | .10953691+01 | .79728502+00 |
| .62962229+00 | .16113408+01 | .42793759+00 | .10969992+01 | .79920379+00 |
| .63005852+00 | .16114690+01 | .42754978+00 | .10986394+01 | .80113266+00 |
| .63049475+00 | .16115979+01 | .42716166+00 | .11002900+01 | .80307172+00 |
| .63093098+00 | .16117274+01 | .42677318+00 | .11019511+01 | .80502108+00 |
| .63136693+00 | .16117649+01 | .42666094+00 | .11024326+01 | .80558584+00 |

$$.18266249+01 = \Delta S/R$$

$$.30165444+02 = P_s/P_{\infty}$$

$$.37184447+01 = \rho_s/\rho_{\infty}$$

$$.81123822+01 = T_s/T_{\infty}$$

TABLE 222. CONICAL FLOWFIELD  $\theta_s = 30.0 \text{ DEG}$ ;  $M_\infty = 10.0$

| $u_s$         | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|---------------|--------------|--------------|--------------|--------------|
| .80698091+00  | .99999976+01 | .52359876+00 | .62518789+00 |              |
| $\theta$      | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .52359876+00  | .16139316+01 | .52359876+00 | .86602539+00 | .50000000+00 |
| .52708939+00  | .16139510+01 | .52012876+00 | .87083013+00 | .50683517+00 |
| .53058001+00  | .16140088+01 | .51669855+00 | .87577044+00 | .51381136+00 |
| .53407064+00  | .16141037+01 | .51330577+00 | .88065177+00 | .52093415+00 |
| .53756127+00  | .16142348+01 | .50994819+00 | .88608023+00 | .52820965+00 |
| .54105189+00  | .16144014+01 | .50662367+00 | .89146229+00 | .53564437+00 |
| .54454252+00  | .16146027+01 | .50333013+00 | .89700472+00 | .54324511+00 |
| .54759682+00  | .16148068+01 | .50004720+00 | .90199166+00 | .55003770+00 |
| .55065112+00  | .16150304+01 | .49763491+00 | .90711220+00 | .55696820+00 |
| .55370542+00  | .16152913+01 | .49481730+00 | .91237187+00 | .56404207+00 |
| .55675972+00  | .16155713+01 | .49201799+00 | .91777663+00 | .57126523+00 |
| .55981401+00  | .16158759+01 | .48923575+00 | .92333258+00 | .57864372+00 |
| .56286831+00  | .16162051+01 | .48646933+00 | .92904641+00 | .58618414+00 |
| .56548628+00  | .16165666+01 | .48416979+00 | .93407504+00 | .59278151+00 |
| .56810425+00  | .16168260+01 | .48176022+00 | .93922959+00 | .59950761+00 |
| .57072222+00  | .16171630+01 | .47941985+00 | .94451511+00 | .60636732+00 |
| .57334019+00  | .16175178+01 | .47708793+00 | .94993681+00 | .61336578+00 |
| .57595816+00  | .16178902+01 | .47476368+00 | .95550040+00 | .62050854+00 |
| .57857613+00  | .16182804+01 | .47244636+00 | .96121186+00 | .62780137+00 |
| .58075777+00  | .16186190+01 | .47051996+00 | .96608892+00 | .63399781+00 |
| .58293942+00  | .16189700+01 | .46859738+00 | .97107695+00 | .64030648+00 |
| .58512106+00  | .16193333+01 | .46667814+00 | .97618005+00 | .64673138+00 |
| .58730270+00  | .16197091+01 | .46476179+00 | .98140246+00 | .65327659+00 |
| .58948434+00  | .16200975+01 | .46284784+00 | .98674882+00 | .65994655+00 |
| .59166598+00  | .16204984+01 | .46093582+00 | .99222394+00 | .66674589+00 |
| .593841130+00 | .16208283+01 | .45940727+00 | .99670012+00 | .67228176+00 |
| .59515661+00  | .16211663+01 | .45787939+00 | .10012647+01 | .67790618+00 |
| .59690172+00  | .16215126+01 | .45635191+00 | .10059205+01 | .68362187+00 |
| .59864724+00  | .16218672+01 | .45482457+00 | .10106707+01 | .68943176+00 |
| .60039255+00  | .16222302+01 | .45329709+00 | .10155182+01 | .69533879+00 |
| .60213786+00  | .16226016+01 | .45176921+00 | .10204666+01 | .70134615+00 |
| .60344685+00  | .16228858+01 | .45062286+00 | .10242461+01 | .70591950+00 |
| .60475583+00  | .16231719+01 | .44947600+00 | .10280858+01 | .71055265+00 |
| .60606483+00  | .16234692+01 | .44832839+00 | .10319866+01 | .71524633+00 |
| .60737332+00  | .16237686+01 | .44717997+00 | .10359506+01 | .72000250+00 |
| .60868201+00  | .16240730+01 | .44603065+00 | .10399798+01 | .72482312+00 |
| .60999071+00  | .16243825+01 | .44488028+00 | .10440759+01 | .72970987+00 |
| .61086317+00  | .16245916+01 | .44411275+00 | .10468447+01 | .73300534+00 |
| .61173563+00  | .16248031+01 | .44334465+00 | .10496447+01 | .73633153+00 |
| .61260810+00  | .16250168+01 | .44257595+00 | .10524764+01 | .73968893+00 |



TABLE 222. (Concluded)

$$M_{\infty} = .99999976+01$$

$$\Theta_s = .52359876+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .61348056+00 | .16252328+01 | .44180658+00 | .10553405+01 | .74387822+00 |
| .61435302+00 | .16254512+01 | .44103654+00 | .10562376+01 | .74649992+00 |
| .61522549+00 | .16256720+01 | .44026577+00 | .10611682+01 | .74995466+00 |
| .61566172+00 | .16257832+01 | .43988013+00 | .10626464+01 | .75169460+00 |
| .61609795+00 | .16258951+01 | .43949422+00 | .10641332+01 | .75344304+00 |
| .61653418+00 | .16260076+01 | .43910815+00 | .10656287+01 | .75520005+00 |
| .61697041+00 | .16261206+01 | .43872182+00 | .10671331+01 | .75696572+00 |
| .61740664+00 | .16262343+01 | .43833531+00 | .10686463+01 | .75874007+00 |
| .61784288+00 | .16263486+01 | .43794858+00 | .10701686+01 | .76052329+00 |
| .61827911+00 | .16264635+01 | .43756159+00 | .10716999+01 | .76231541+00 |
| .61871534+00 | .16265790+01 | .43717438+00 | .10732404+01 | .76411645+00 |
| .61915157+00 | .16266951+01 | .43678696+00 | .10747902+01 | .76592658+00 |
| .61958780+00 | .16269118+01 | .43639927+00 | .10763494+01 | .76774590+00 |
| .62002403+00 | .16269291+01 | .43601131+00 | .10779180+01 | .76957445+00 |
| .62046026+00 | .16270471+01 | .43562310+00 | .10794962+01 | .77141241+00 |
| .62089650+00 | .16271657+01 | .43523461+00 | .10810840+01 | .77325971+00 |
| .62133273+00 | .16272850+01 | .43484584+00 | .10826816+01 | .77511655+00 |
| .62176896+00 | .16274049+01 | .43445683+00 | .10842891+01 | .77698304+00 |
| .62220519+00 | .16275254+01 | .43406750+00 | .10859065+01 | .77885925+00 |
| .62264142+00 | .16276466+01 | .43367788+00 | .10875341+01 | .78074528+00 |
| .62307765+00 | .16277684+01 | .43328798+00 | .10891718+01 | .78264122+00 |
| .62351388+00 | .16278908+01 | .43289775+00 | .10908197+01 | .78454714+00 |
| .62395012+00 | .16280139+01 | .43250720+00 | .10924781+01 | .78646321+00 |
| .62438635+00 | .16281377+01 | .43211635+00 | .10941470+01 | .78838953+00 |
| .62482258+00 | .16282621+01 | .43172516+00 | .10958264+01 | .79032613+00 |
| .62518789+00 | .16283668+01 | .43133973+00 | .10972411+01 | .79195590+00 |

$$.23706138+01 = \Delta S/R$$

$$.46355504+02 = P_s/P_{\infty}$$

$$.38708885+01 = \rho_s/\rho_{\infty}$$

$$.11975417+02 = T_s/T_{\infty}$$

TABLE 223. CONICAL FLOWFIELD  $\theta_s = 30.0$  DEG;  $M_\infty = 12.5$

| $\underline{u_s}$ | $\underline{M_\infty}$ | $\underline{\theta_s}$ | $\underline{\theta_w}$ |
|-------------------|------------------------|------------------------|------------------------|
| .81286025+00      | .12500000+02           | .52359876+00           | .62142281+00           |

| $\underline{\theta}$ | $\underline{M_1^*}$ | $\underline{\psi_1}$ | $\underline{x}$ | $\underline{r}$ |
|----------------------|---------------------|----------------------|-----------------|-----------------|
| .52359876+00         | .16256900+01        | .52359876+00         | .86602539+00    | .50000000+00    |
| .52708939+00         | .16257097+01        | .52012876+00         | .87100163+00    | .50693499+00    |
| .53058001+00         | .16257678+01        | .51669844+00         | .87612081+00    | .51401693+00    |
| .53407064+00         | .16258634+01        | .51330541+00         | .88138891+00    | .52125181+00    |
| .53756127+00         | .16259956+01        | .50994736+00         | .88681248+00    | .52864616+00    |
| .54105189+00         | .16261634+01        | .50662206+00         | .89239845+00    | .53620687+00    |
| .54454252+00         | .16263662+01        | .50332737+00         | .89815436+00    | .54394135+00    |
| .54759682+00         | .16265718+01        | .50046798+00         | .90333631+00    | .55085767+00    |
| .55065112+00         | .16268033+01        | .49762907+00         | .90866017+00    | .55791865+00    |
| .55370542+00         | .16270604+01        | .49480930+00         | .91413181+00    | .56513009+00    |
| .55675972+00         | .16273426+01        | .49200736+00         | .91975775+00    | .57249836+00    |
| .55981401+00         | .16276499+01        | .48922195+00         | .92554475+00    | .58003008+00    |
| .56286831+00         | .16279820+01        | .48645181+00         | .93150017+00    | .58773234+00    |
| .56548628+00         | .16282863+01        | .48408859+00         | .93674468+00    | .59447572+00    |
| .56810425+00         | .16286086+01        | .48173485+00         | .94212383+00    | .60135499+00    |
| .57072222+00         | .16289489+01        | .47938979+00         | .94764313+00    | .60837547+00    |
| .57334019+00         | .16293072+01        | .47705262+00         | .95330841+00    | .61554280+00    |
| .57595816+00         | .16296834+01        | .47472253+00         | .95912591+00    | .62286297+00    |
| .57857613+00         | .16300777+01        | .47239871+00         | .96510220+00    | .63034229+00    |
| .58075777+00         | .16304200+01        | .47004664+00         | .97020893+00    | .63670157+00    |
| .58293942+00         | .16307749+01        | .46853739+00         | .97543518+00    | .64318020+00    |
| .58512106+00         | .16311425+01        | .46661121+00         | .98078548+00    | .64978253+00    |
| .58730270+00         | .16315227+01        | .46468735+00         | .98626468+00    | .65651315+00    |
| .58948434+00         | .16319158+01        | .46276532+00         | .99187795+00    | .66337696+00    |
| .59166598+00         | .16323217+01        | .46084461+00         | .99763062+00    | .67037903+00    |
| .59341130+00         | .16326559+01        | .45930863+00         | .10023367+01    | .67608384+00    |
| .59515661+00         | .16329984+01        | .45777288+00         | .10071393+01    | .68188354+00    |
| .59690192+00         | .16333494+01        | .45623709+00         | .10120407+01    | .68778116+00    |
| .59864724+00         | .16337089+01        | .45470095+00         | .10170449+01    | .69377994+00    |
| .60039255+00         | .16340771+01        | .45316418+00         | .10221552+01    | .69988322+00    |
| .60213786+00         | .16344540+01        | .45162648+00         | .10273756+01    | .70609456+00    |
| .60344656+00         | .16347430+01        | .45009722+00         | .10313645+01    | .71082518+00    |
| .60475525+00         | .16350371+01        | .44931714+00         | .10354193+01    | .71562026+00    |
| .60606395+00         | .16353362+01        | .44816111+00         | .10395417+01    | .72048157+00    |
| .60737264+00         | .16356404+01        | .44700397+00         | .10437337+01    | .72541083+00    |
| .60868134+00         | .16359498+01        | .44584558+00         | .10479972+01    | .73040985+00    |
| .60999003+00         | .16362644+01        | .44468579+00         | .10523343+01    | .73548064+00    |
| .61086249+00         | .16364771+01        | .44391175+00         | .10552676+01    | .73890200+00    |
| .61173496+00         | .16366922+01        | .44313696+00         | .10582352+01    | .74235673+00    |
| .61260742+00         | .16369097+01        | .44236140+00         | .10612378+01    | .74584544+00    |

TABLE 223. (Concluded)

$$M_{\infty} = .12500000+02$$

$$\Theta_s = .52359876+00$$

| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .61347988+00 | .16371296+01 | .44158501+00 | .10642761+01 | .74936881+00 |
| .61435235+00 | .16373519+01 | .44080774+00 | .10673508+01 | .75292746+00 |
| .61522481+00 | .16375767+01 | .44002957+00 | .10704627+01 | .75652219+00 |
| .61566104+00 | .16376900+01 | .43964010+00 | .10720328+01 | .75833327+00 |
| .61609727+00 | .16378040+01 | .43925039+00 | .10736124+01 | .76015356+00 |
| .61653350+00 | .16379186+01 | .43886041+00 | .10752017+01 | .76198326+00 |
| .61696973+00 | .16380338+01 | .43847016+00 | .10768009+01 | .76382241+00 |
| .61740597+00 | .16381496+01 | .43807966+00 | .10784098+01 | .76567110+00 |
| .61784220+00 | .16382661+01 | .43768888+00 | .10800288+01 | .76752940+00 |
| .61827843+00 | .16383832+01 | .43729784+00 | .10816578+01 | .76939748+00 |
| .61871466+00 | .16385010+01 | .43690646+00 | .10832970+01 | .77127536+00 |
| .61915089+00 | .16386194+01 | .43651483+00 | .10849466+01 | .77316321+00 |
| .61958712+00 | .16387384+01 | .43612286+00 | .10866065+01 | .77506109+00 |
| .62002335+00 | .16388582+01 | .43573061+00 | .10882770+01 | .77696913+00 |
| .62045959+00 | .16389785+01 | .43533800+00 | .10899581+01 | .77888741+00 |
| .62089582+00 | .16390996+01 | .43494509+00 | .10916500+01 | .78081603+00 |
| .62133205+00 | .16392213+01 | .43455184+00 | .10933527+01 | .78275514+00 |
| .62142281+00 | .16392467+01 | .43446998+00 | .10937084+01 | .78315989+00 |

$$.29552608+01 = \Delta S/R$$

$$.71651783+02 = P_s/P_{\infty}$$

$$.39784798+01 = \rho_s/\rho_{\infty}$$

$$.18009840+02 = T_s/T_{\infty}$$

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TABLE 224. CONICAL FLOWFIELD  $\theta_s = 30.0$  DEG;  $M_\infty = 15.0$

| $\underline{u}_s$    | $\underline{M}_\infty$ | $\underline{\theta}_s$ | $\underline{\theta}_w$ |                 |
|----------------------|------------------------|------------------------|------------------------|-----------------|
| .81609394+00         | .14999987+02           | .52359876+00           | .61937439+00           |                 |
| $\underline{\theta}$ | $\underline{M}_1^*$    | $\underline{\psi}_1$   | $\underline{x}$        | $\underline{r}$ |
| .52359876+00         | .16321573+01           | .52359876+00           | .86602539+00           | .50000000+00    |
| .52708939+00         | .16321770+01           | .52012875+00           | .87109882+00           | .50699155+00    |
| .53058001+00         | .16322355+01           | .51669838+00           | .87631946+00           | .51413347+00    |
| .53407064+00         | .16323314+01           | .51330521+00           | .88169356+00           | .52143198+00    |
| .53756127+00         | .16324642+01           | .50994688+00           | .88722800+00           | .52889386+00    |
| .54105189+00         | .16326327+01           | .50662114+00           | .89293006+00           | .53652629+00    |
| .54454252+00         | .16328363+01           | .50332578+00           | .89880751+00           | .54433692+00    |
| .54759682+00         | .16330428+01           | .50046561+00           | .90410064+00           | .55132376+00    |
| .55065112+00         | .16332753+01           | .49762569+00           | .90954044+00           | .55845913+00    |
| .55370542+00         | .16335335+01           | .49480467+00           | .91513318+00           | .56574915+00    |
| .55675972+00         | .16338171+01           | .49200121+00           | .92088556+00           | .57320037+00    |
| .55981401+00         | .16341259+01           | .48921398+00           | .92680482+00           | .58081974+00    |
| .56286831+00         | .16344596+01           | .48644168+00           | .93289854+00           | .58861465+00    |
| .56548628+00         | .16347654+01           | .48407632+00           | .93826687+00           | .59544172+00    |
| .56810425+00         | .16350894+01           | .48172016+00           | .94377498+00           | .60240892+00    |
| .57072222+00         | .16354315+01           | .47937237+00           | .94942863+00           | .60952175+00    |
| .57334019+00         | .16357917+01           | .47703215+00           | .95523401+00           | .61678614+00    |
| .57595816+00         | .16361701+01           | .47469867+00           | .96119775+00           | .62420844+00    |
| .57857613+00         | .16365667+01           | .47237108+00           | .96732689+00           | .63179531+00    |
| .58075777+00         | .16369111+01           | .47043532+00           | .97256621+00           | .63824854+00    |
| .58293942+00         | .16372682+01           | .46850257+00           | .97793011+00           | .64482530+00    |
| .58512106+00         | .16376381+01           | .46657234+00           | .98342346+00           | .65153023+00    |
| .58730270+00         | .16380209+01           | .46464412+00           | .98905143+00           | .65836817+00    |
| .58948434+00         | .16384166+01           | .46271738+00           | .99481944+00           | .66534425+00    |
| .59166598+00         | .16388254+01           | .46079158+00           | .10007333+01           | .67246393+00    |
| .59341130+00         | .16391620+01           | .45925126+00           | .10055734+01           | .67826685+00    |
| .59515661+00         | .16395070+01           | .45771091+00           | .10105140+01           | .68416842+00    |
| .59690192+00         | .16398607+01           | .45617025+00           | .10155587+01           | .69017193+00    |
| .59864724+00         | .16402231+01           | .45462876+00           | .10207109+01           | .69628072+00    |
| .60039255+00         | .16405942+01           | .45308675+00           | .10259746+01           | .70249841+00    |
| .60213748+00         | .16409750+01           | .45154302+00           | .10313527+01           | .70882738+00    |
| .60344617+00         | .16412665+01           | .45003842+00           | .10354647+01           | .71365046+00    |
| .60475487+00         | .16415630+01           | .44922444+00           | .10396460+01           | .71854088+00    |
| .60606356+00         | .16418647+01           | .44806349+00           | .10438984+01           | .72350044+00    |
| .60737225+00         | .16421717+01           | .44690123+00           | .10482240+01           | .72853104+00    |
| .60868095+00         | .16424840+01           | .44573750+00           | .10526251+01           | .73363473+00    |
| .60998964+00         | .16428016+01           | .44457216+00           | .10571038+01           | .73881349+00    |
| .61086211+00         | .16430164+01           | .44379429+00           | .10601338+01           | .74230874+00    |
| .61173457+00         | .16432336+01           | .44301557+00           | .10632001+01           | .74583901+00    |
| .61260703+00         | .16434532+01           | .44223595+00           | .10663034+01           | .74940496+00    |

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TABLE 224. (Concluded)

$$M_{\infty} = .14999987+02$$

$$\Theta_s = .52359876+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $\underline{x}$ | $\underline{r}$ |
|--------------|--------------|--------------|-----------------|-----------------|
| .61347950+00 | .16436753+01 | .44145540+00 | .10694445+01    | .75300732+00    |
| .61435196+00 | .16438999+01 | .44067387+00 | .10726240+01    | .75664668+00    |
| .61522442+00 | .16441271+01 | .43989129+00 | .10758428+01    | .76032384+00    |
| .61566065+00 | .16442416+01 | .43949956+00 | .10774673+01    | .76217689+00    |
| .61609688+00 | .16443568+01 | .43910763+00 | .10791018+01    | .76403964+00    |
| .61653312+00 | .16444726+01 | .43871535+00 | .10807467+01    | .76591225+00    |
| .61696935+00 | .16445890+01 | .43832279+00 | .10824018+01    | .76779475+00    |
| .61740558+00 | .16447062+01 | .43792992+00 | .10840674+01    | .76968734+00    |
| .61784181+00 | .16448239+01 | .43753675+00 | .10857437+01    | .77159011+00    |
| .61827804+00 | .16449423+01 | .43714326+00 | .10874306+01    | .77350308+00    |
| .61871427+00 | .16450614+01 | .43674943+00 | .10891283+01    | .77542645+00    |
| .61915050+00 | .16451812+01 | .43635529+00 | .10908370+01    | .77736026+00    |
| .61937439+00 | .16452429+01 | .43615287+00 | .10917182+01    | .77835686+00    |

$$.34545658+01 = \Delta S/R$$

$$.10256928+03 = P_s/P_{\infty}$$

$$.40406263+01 = \rho_s/\rho_{\infty}$$

$$.25384500+02 = T_s/T_{\infty}$$

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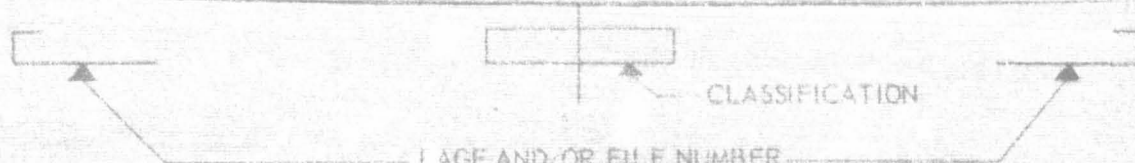
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TABLE 225. CONICAL FLOWFIELD  $\theta_s = 30.0 \text{ DEG}$ ;  $M_\infty = 17.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .81805773+00 | .17499974+02 | .52359876+00 | .61813819+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .52359876+00 | .16360848+01 | .52359876+00 | .86602539+00 | .50000000+00 |
| .52665306+00 | .16360999+01 | .52056027+00 | .87050913+00 | .50613999+00 |
| .52970736+00 | .16361449+01 | .51755236+00 | .87510701+00 | .51239612+00 |
| .53276166+00 | .16362189+01 | .51457335+00 | .87982328+00 | .51877262+00 |
| .53581595+00 | .16363213+01 | .51162163+00 | .88466255+00 | .52527402+00 |
| .53887025+00 | .16364515+01 | .50869564+00 | .88962972+00 | .53190514+00 |
| .54192455+00 | .16366091+01 | .50579386+00 | .89472993+00 | .53867100+00 |
| .54497885+00 | .16367934+01 | .50291484+00 | .89996866+00 | .54557699+00 |
| .54759682+00 | .16369725+01 | .50046413+00 | .90457363+00 | .55161220+00 |
| .55021479+00 | .16371707+01 | .49802819+00 | .90928854+00 | .55775829+00 |
| .55283276+00 | .16373879+01 | .49560617+00 | .91411751+00 | .56401926+00 |
| .55545073+00 | .16376239+01 | .49319720+00 | .91906469+00 | .57039919+00 |
| .55806870+00 | .16378785+01 | .49080046+00 | .92413479+00 | .57690255+00 |
| .56068667+00 | .16381516+01 | .48841507+00 | .92933258+00 | .58353398+00 |
| .56330464+00 | .16384431+01 | .48604023+00 | .93466315+00 | .59029836+00 |
| .56548628+00 | .16387000+01 | .48406865+00 | .93921069+00 | .59604069+00 |
| .56766792+00 | .16389696+01 | .48210333+00 | .94385748+00 | .60188212+00 |
| .56984957+00 | .16392518+01 | .48014379+00 | .94860700+00 | .60782593+00 |
| .57203121+00 | .16395467+01 | .47818955+00 | .95346296+00 | .61387568+00 |
| .57421285+00 | .16398542+01 | .47624013+00 | .95842911+00 | .62003494+00 |
| .57639449+00 | .16401744+01 | .47429503+00 | .96350963+00 | .62630767+00 |
| .57857613+00 | .16405074+01 | .47235377+00 | .96870865+00 | .63269779+00 |
| .58032145+00 | .16407829+01 | .47080319+00 | .97295632+00 | .63789737+00 |
| .58206676+00 | .16410666+01 | .46925449+00 | .97728515+00 | .64317711+00 |
| .58381207+00 | .16413585+01 | .46770740+00 | .98169771+00 | .64853945+00 |
| .58555739+00 | .16416587+01 | .46616166+00 | .98619664+00 | .65398585+00 |
| .58730270+00 | .16419672+01 | .46461701+00 | .99078477+00 | .65952198+00 |
| .58904801+00 | .16422840+01 | .46307317+00 | .99546494+00 | .66514753+00 |
| .59079333+00 | .16426093+01 | .46152986+00 | .10002402+01 | .67086633+00 |
| .59210231+00 | .16428589+01 | .46003725+00 | .10038861+01 | .67521850+00 |
| .59341130+00 | .16431132+01 | .45921526+00 | .10075886+01 | .67962610+00 |
| .59472028+00 | .16433724+01 | .45805787+00 | .10113492 01 | .68409054+00 |
| .59602927+00 | .16436364+01 | .45690023+00 | .10151696+01 | .68861324+00 |
| .59733825+00 | .16439054+01 | .45574225+00 | .10190513+01 | .69319570+00 |
| .59864724+00 | .16441793+01 | .45458376+00 | .10229958+01 | .69783938+00 |
| .59995613+00 | .16444584+01 | .45342458+00 | .10270046+01 | .70254552+00 |
| .60082859+00 | .16446475+01 | .45265129+00 | .10297136+01 | .70571823+00 |
| .60170105+00 | .16448385+01 | .45187762+00 | .10324526+01 | .70892006+00 |
| .60257351+00 | .16450324+01 | .45110352+00 | .10352221+01 | .71215153+00 |
| .60344598+00 | .16452284+01 | .45032898+00 | .10380229+01 | .71541326+00 |



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TABLE 225. (Concluded)

$$M_{\infty} = .17499974+02$$

$$\Theta_s = .52359876+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .60431844+00 | .16454265+01 | .44955374+00 | .10408554+01 | .71870574+00 |
| .60519090+00 | .16456271+01 | .44877835+00 | .10437203+01 | .72202951+00 |
| .60606337+00 | .16458299+01 | .44800217+00 | .10466181+01 | .72538513+00 |
| .60649960+00 | .16459322+01 | .44761304+00 | .10480796+01 | .72707509+00 |
| .60693583+00 | .16460351+01 | .44722533+00 | .10495496+01 | .72877326+00 |
| .60737206+00 | .16461386+01 | .44683667+00 | .10510282+01 | .73047968+00 |
| .60780829+00 | .16462427+01 | .44644782+00 | .10525154+01 | .73219446+00 |
| .60824452+00 | .16463474+01 | .44605879+00 | .10540114+01 | .73391764+00 |
| .60868075+00 | .16464527+01 | .44566957+00 | .10555162+01 | .73564935+00 |
| .60911699+00 | .16465585+01 | .44528015+00 | .10570299+01 | .73738964+00 |
| .60955322+00 | .16466651+01 | .44489054+00 | .10585525+01 | .73913855+00 |
| .60998945+00 | .16467721+01 | .44450071+00 | .10600843+01 | .74089626+00 |
| .61042568+00 | .16468799+01 | .44411067+00 | .10616253+01 | .74266278+00 |
| .61086191+00 | .16469882+01 | .44372041+00 | .10631755+01 | .74443823+00 |
| .61129814+00 | .16470971+01 | .44332992+00 | .10647351+01 | .74622265+00 |
| .61173438+00 | .16472067+01 | .44293919+00 | .10663041+01 | .74801618+00 |
| .61217061+00 | .16473169+01 | .44254823+00 | .10678828+01 | .74981889+00 |
| .61260684+00 | .16474277+01 | .44215703+00 | .10694711+01 | .75163090+00 |
| .61304307+00 | .16475391+01 | .44176557+00 | .10710691+01 | .75345225+00 |
| .61347930+00 | .16476512+01 | .44137385+00 | .10726771+01 | .75528307+00 |
| .61391553+00 | .16477639+01 | .44098186+00 | .10742950+01 | .75712346+00 |
| .61435176+00 | .16478772+01 | .44058961+00 | .10759230+01 | .75897349+00 |
| .61478800+00 | .16479912+01 | .44019707+00 | .10775611+01 | .76083326+00 |
| .61522423+00 | .16481058+01 | .43980427+00 | .10792096+01 | .76270289+00 |
| .61566046+00 | .16482211+01 | .43941114+00 | .10808684+01 | .76458246+00 |
| .61609669+00 | .16483370+01 | .43901774+00 | .10825378+01 | .76647209+00 |
| .61653292+00 | .16484536+01 | .43862399+00 | .10842177+01 | .76837184+00 |
| .61696915+00 | .16485709+01 | .43822995+00 | .10859084+01 | .77028184+00 |
| .61740538+00 | .16486888+01 | .43783560+00 | .10876100+01 | .77220225+00 |
| .61784162+00 | .16488073+01 | .43744089+00 | .10893226+01 | .77413315+00 |
| .61813819+00 | .16488883+01 | .43717239+00 | .10904932+01 | .77545188+00 |

$$.38877034+01 = \Delta S/R$$

$$.13910789+03 = P_s/P_{\infty}$$

$$.40794520+01 = \rho_s/\rho_{\infty}$$

$$.34099652+02 = T_s/T_{\infty}$$

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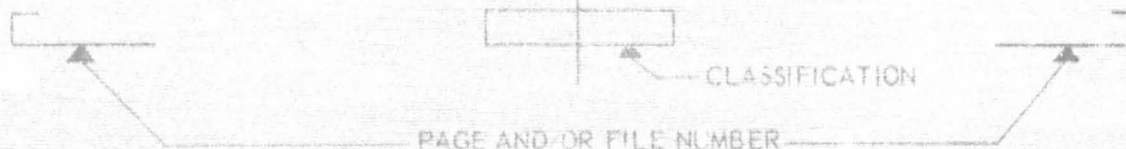
EXTREME LIMIT

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TABLE 226. CONICAL FLOWFIELD  $\theta_s = 30.0 \text{ DEG}$ ;  $M_\infty = 20.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .81933795+00 | .19999998+02 | .52359876+00 | .61733530+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .52359876+00 | .16386452+01 | .52359876+00 | .86602539+00 | .50000000+00 |
| .52665306+00 | .16386604+01 | .52056027+00 | .87054369+00 | .50616008+00 |
| .52970736+00 | .16387054+01 | .51755235+00 | .87517741+00 | .51243734+00 |
| .53276166+00 | .16387795+01 | .51457330+00 | .87993100+00 | .51863614+00 |
| .53581595+00 | .16388821+01 | .51162150+00 | .88480908+00 | .52536102+00 |
| .53887025+00 | .16390125+01 | .50869538+00 | .88981668+00 | .53201692+00 |
| .54192455+00 | .16391703+01 | .50579342+00 | .89495898+00 | .53880890+00 |
| .54497885+00 | .16393550+01 | .50291414+00 | .90024161+00 | .54574245+00 |
| .54759682+00 | .16395344+01 | .50046314+00 | .90488572+00 | .55180251+00 |
| .55021479+00 | .16397329+01 | .49802686+00 | .90964125+00 | .55797464+00 |
| .55283276+00 | .16399505+01 | .49560440+00 | .91451238+00 | .56426290+00 |
| .55545073+00 | .16401869+01 | .49319494+00 | .91950338+00 | .57067145+00 |
| .55806870+00 | .16404420+01 | .49079759+00 | .92461904+00 | .57720485+00 |
| .56068667+00 | .16407156+01 | .48841151+00 | .92986423+00 | .58386780+00 |
| .56330464+00 | .16410076+01 | .48603587+00 | .93524416+00 | .59066530+00 |
| .56548628+00 | .16412650+01 | .48406354+00 | .93983433+00 | .59643646+00 |
| .56766792+00 | .16415351+01 | .48209739+00 | .94452527+00 | .60230795+00 |
| .56984957+00 | .16418180+01 | .48013693+00 | .94932053+00 | .60828313+00 |
| .57203121+00 | .16421135+01 | .47818168+00 | .95422386+00 | .61436558+00 |
| .57421285+00 | .16424217+01 | .47623115+00 | .95923919+00 | .62055900+00 |
| .57639449+00 | .16427427+01 | .47428484+00 | .96437076+00 | .62686742+00 |
| .57857613+00 | .16430764+01 | .47234226+00 | .96962277+00 | .63329484+00 |
| .58032145+00 | .16433525+01 | .47079054+00 | .97391428+00 | .63852543+00 |
| .58206676+00 | .16436369+01 | .46924061+00 | .97828834+00 | .64383733+00 |
| .58381207+00 | .16439296+01 | .46769223+00 | .98274755+00 | .64923301+00 |
| .58555739+00 | .16442306+01 | .46614511+00 | .98729466+00 | .65471499+00 |
| .58730270+00 | .16445399+01 | .46459898+00 | .99193248+00 | .66028596+00 |
| .58904801+00 | .16448576+01 | .46305357+00 | .99666404+00 | .66594873+00 |
| .59079333+00 | .16451838+01 | .46150859+00 | .10014924+01 | .67170618+00 |
| .59210231+00 | .16454341+01 | .46003497+00 | .10051793+01 | .67608833+00 |
| .59341130+00 | .16456892+01 | .45919131+00 | .10089238+01 | .68052673+00 |
| .59472028+00 | .16459491+01 | .45803247+00 | .10127276+01 | .68502290+00 |
| .59602927+00 | .16462140+01 | .45687334+00 | .10165924+01 | .68957834+00 |
| .59733825+00 | .16464838+01 | .45571379+00 | .10205195+01 | .69419444+00 |
| .59864724+00 | .16467586+01 | .45455367+00 | .10245108+01 | .69887281+00 |
| .59995593+00 | .16470389+01 | .45339265+00 | .10285671+01 | .70361403+00 |
| .60082839+00 | .16472286+01 | .45261817+00 | .10313088+01 | .70681119+00 |
| .60170086+00 | .16474206+01 | .45184329+00 | .10340812+01 | .71003801+00 |
| .60257332+00 | .16476149+01 | .45106795+00 | .10368847+01 | .71329501+00 |
| .60344578+00 | .16478114+01 | .45029213+00 | .10397202+01 | .71658275+00 |


 CLASSIFICATION  
 PAGE AND/OR FILE NUMBER

407

437



TABLE 226. (Concluded)

$$M_{\infty} = .19999998+02$$

$$\Theta_s = .52359876+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .60431825+00 | .16480103+01 | .44951577+00 | .10425880+01 | .71990176+00 |
| .60519071+00 | .16482116+01 | .44873882+00 | .10454888+01 | .72325265+00 |
| .60606317+00 | .16484151+01 | .44796125+00 | .10484233+01 | .72663599+00 |
| .60649940+00 | .16485178+01 | .44757220+00 | .10499034+01 | .72834001+00 |
| .60693564+00 | .16486211+01 | .44718298+00 | .10513922+01 | .73005238+00 |
| .60737187+00 | .16487250+01 | .44679359+00 | .10528897+01 | .73177313+00 |
| .60780810+00 | .16488294+01 | .44640400+00 | .10543960+01 | .73350244+00 |
| .60824433+00 | .16489345+01 | .44601422+00 | .10559114+01 | .73524033+00 |
| .60868056+00 | .16490402+01 | .44562423+00 | .10574357+01 | .73698688+00 |
| .60911679+00 | .16491465+01 | .44523405+00 | .10589691+01 | .73874217+00 |
| .60955302+00 | .16492534+01 | .44484364+00 | .10605117+01 | .74050628+00 |
| .60998926+00 | .16493609+01 | .44445302+00 | .10620637+01 | .74227933+00 |
| .61042549+00 | .16494691+01 | .44406217+00 | .10636250+01 | .74406138+00 |
| .61086172+00 | .16495778+01 | .44367109+00 | .10651958+01 | .74585249+00 |
| .61129795+00 | .16496872+01 | .44327978+00 | .10667761+01 | .74765281+00 |
| .61173418+00 | .16497972+01 | .44288822+00 | .10683662+01 | .74946241+00 |
| .61217041+00 | .16499078+01 | .44249641+00 | .10699660+01 | .75128135+00 |
| .61260664+00 | .16500191+01 | .44210435+00 | .10715757+01 | .75310971+00 |
| .61304288+00 | .16501310+01 | .44171201+00 | .10731954+01 | .75494768+00 |
| .61347911+00 | .16502435+01 | .44131941+00 | .10748252+01 | .75679530+00 |
| .61391534+00 | .16503567+01 | .44092653+00 | .10764652+01 | .75865265+00 |
| .61435157+00 | .16504705+01 | .44053335+00 | .10781155+01 | .76051984+00 |
| .61478780+00 | .16505850+01 | .44013991+00 | .10797762+01 | .76239698+00 |
| .61522403+00 | .16507001+01 | .43974617+00 | .10814475+01 | .76428419+00 |
| .61566027+00 | .16508159+01 | .43935207+00 | .10831294+01 | .76618152+00 |
| .61609650+00 | .16509323+01 | .43895771+00 | .10848221+01 | .76808912+00 |
| .61653273+00 | .16510494+01 | .43856301+00 | .10865256+01 | .77000710+00 |
| .61696896+00 | .16511672+01 | .43816797+00 | .10882402+01 | .77193554+00 |
| .61733530+00 | .16512666+01 | .43783596+00 | .10896886+01 | .77356322+00 |

$$.42690343+01 = \Delta S/R$$

$$.18126853+03 = P_s/P_{\infty}$$

$$.41052242+01 = \rho_s/\rho_{\infty}$$

$$.44155573+02 = T_s/T_{\infty}$$

TABLE 227. CONICAL FLOWFIELD  $\theta_s = 30.0 \text{ DEG}$ ;  $M_\infty = 22.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .82021821+00 | .22499995+02 | .52359876+00 | .61678468+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .52359876+00 | .16404057+01 | .52359876+00 | .86602539+00 | .50000000+00 |
| .52665306+00 | .16404209+01 | .52056027+00 | .87056757+00 | .50617396+00 |
| .52970736+00 | .16404659+01 | .51755233+00 | .87522618+00 | .51246589+00 |
| .53276166+00 | .16405401+01 | .51457325+00 | .88000564+00 | .51888015+00 |
| .53581595+00 | .16406428+01 | .51162140+00 | .88491067+00 | .52542134+00 |
| .53887025+00 | .16407734+01 | .50869519+00 | .88994636+00 | .53209445+00 |
| .54192455+00 | .16409314+01 | .50579311+00 | .89511791+00 | .53890458+00 |
| .54497885+00 | .16411163+01 | .50291365+00 | .90043101+00 | .54585727+00 |
| .54759682+00 | .16412958+01 | .50046245+00 | .90510228+00 | .55193456+00 |
| .55021479+00 | .16414946+01 | .49802592+00 | .90988598+00 | .55812476+00 |
| .55283276+00 | .16417125+01 | .49560318+00 | .91478636+00 | .56443195+00 |
| .55545073+00 | .16419492+01 | .49319336+00 | .91980780+00 | .57086039+00 |
| .55806870+00 | .16422046+01 | .49079559+00 | .92495510+00 | .57741464+00 |
| .56068667+00 | .16424786+01 | .48840943+00 | .93023318+00 | .58409947+00 |
| .56330464+00 | .16427710+01 | .48603284+00 | .93564736+00 | .59091995+00 |
| .56548628+00 | .16430287+01 | .48405999+00 | .94026724+00 | .59671120+00 |
| .56766792+00 | .16432992+01 | .48209325+00 | .94498889+00 | .60260360+00 |
| .56984957+00 | .16435825+01 | .48013216+00 | .94981595+00 | .60860057+00 |
| .57203121+00 | .16438784+01 | .47817621+00 | .95475224+00 | .61470576+00 |
| .57421285+00 | .16441871+01 | .47622490+00 | .95980179+00 | .62092296+00 |
| .57639449+00 | .16445086+01 | .47427774+00 | .96496883+00 | .62725618+00 |
| .57857613+00 | .16448428+01 | .47233424+00 | .97025769+00 | .63370952+00 |
| .58032145+00 | .16451195+01 | .47078172+00 | .97457969+00 | .63896170+00 |
| .58206676+00 | .16454044+01 | .46923095+00 | .97898521+00 | .64429597+00 |
| .58381207+00 | .16456975+01 | .46768165+00 | .98347691+00 | .64971484+00 |
| .58555739+00 | .16459990+01 | .46613357+00 | .98805752+00 | .65522088+00 |
| .58730270+00 | .16463089+01 | .46458641+00 | .99272995+00 | .66081680+00 |
| .58904801+00 | .16466273+01 | .46303991+00 | .99749734+00 | .66650552+00 |
| .59079333+00 | .16469541+01 | .46149378+00 | .10023627+01 | .67228992+00 |
| .59210231+00 | .16472048+01 | .46003342+00 | .10060782+01 | .67669296+00 |
| .59341130+00 | .16474604+01 | .45917460+00 | .10098521+01 | .68115290+00 |
| .59472028+00 | .16477209+01 | .45801477+00 | .10136861+01 | .68567123+00 |
| .59602927+00 | .16479864+01 | .45685460+00 | .10175818+01 | .69024949+00 |
| .59733825+00 | .16482567+01 | .45569394+00 | .10215407+01 | .69488908+00 |
| .59864714+00 | .16485323+01 | .45453261+00 | .10255643+01 | .69959132+00 |
| .59995583+00 | .16488133+01 | .45337040+00 | .10296541+01 | .70435749+00 |
| .60082830+00 | .16490034+01 | .45259511+00 | .10324186+01 | .70757168+00 |
| .60170076+00 | .16491958+01 | .45181937+00 | .10352142+01 | .71081588+00 |
| .60257322+00 | .16493906+01 | .45104316+00 | .10380416+01 | .71409067+00 |
| .60344569+00 | .16495876+01 | .45026644+00 | .10409011+01 | .71739651+00 |



TABLE 227. (Concluded)

$$M_{\infty} = .22499995+02$$

$$\Theta_s = .52359876+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .60431815+00 | .16497870+01 | .44948917+00 | .10437935+01 | .72073406+00 |
| .60519061+00 | .16499887+01 | .44871128+00 | .10467195+01 | .72410385+00 |
| .60606308+00 | .16501928+01 | .44793272+00 | .10496796+01 | .72750653+00 |
| .60649931+00 | .16502958+01 | .44754318+00 | .10511727+01 | .72922041+00 |
| .60693554+00 | .16503993+01 | .44715346+00 | .10526746+01 | .73094267+00 |
| .60737177+00 | .16505035+01 | .44676355+00 | .10541854+01 | .73267353+00 |
| .60780800+00 | .16506082+01 | .44637343+00 | .10557052+01 | .73441299+00 |
| .60824423+00 | .16507136+01 | .44598313+00 | .10572340+01 | .73616113+00 |
| .60868046+00 | .16508196+01 | .44559261+00 | .10587720+01 | .73791805+00 |
| .60911670+00 | .16509261+01 | .44520188+00 | .10603192+01 | .73968384+00 |
| .60955293+00 | .16510333+01 | .44481093+00 | .10618757+01 | .74145852+00 |
| .60998916+00 | .16511411+01 | .44441976+00 | .10634417+01 | .74324228+00 |
| .61042539+00 | .16512495+01 | .44402835+00 | .10650173+01 | .74503520+00 |
| .61086162+00 | .16513586+01 | .44363671+00 | .10666024+01 | .74683727+00 |
| .61129785+00 | .16514683+01 | .44324481+00 | .10681972+01 | .74864864+00 |
| .61173408+00 | .16515786+01 | .44285266+00 | .10698019+01 | .75046943+00 |
| .61217032+00 | .16516895+01 | .44246026+00 | .10714166+01 | .75229970+00 |
| .61260655+00 | .16518011+01 | .44206759+00 | .10730413+01 | .75413958+00 |
| .61304278+00 | .16519134+01 | .44167464+00 | .10746761+01 | .75598915+00 |
| .61347901+00 | .16520262+01 | .44128142+00 | .10763212+01 | .75784849+00 |
| .61391524+00 | .16521397+01 | .44088790+00 | .10779766+01 | .75971767+00 |
| .61435147+00 | .16522539+01 | .44049409+00 | .10796426+01 | .76159689+00 |
| .61478771+00 | .16523686+01 | .44010998+00 | .10813190+01 | .76348615+00 |
| .61522394+00 | .16524841+01 | .43972559+00 | .10830063+01 | .76538565+00 |
| .61566017+00 | .16526002+01 | .43934083+00 | .10847043+01 | .76729542+00 |
| .61609640+00 | .16527170+01 | .43895580+00 | .10864133+01 | .76921559+00 |
| .61653263+00 | .16528345+01 | .43857041+00 | .10881334+01 | .77114632+00 |
| .61678468+00 | .16529526+01 | .43829180+00 | .10891322+01 | .77226668+00 |

$$.46090600+01 = \Delta S/R$$

$$.22905009+03 = P_s/P_{\infty}$$

$$.41231601+01 = \rho_s/\rho_{\infty}$$

$$.55552073+02 = T_s/T_{\infty}$$

TABLE 228. CONICAL FLOWFIELD  $\theta_s = 30.0 \text{ DEG}$ ;  $M_\infty = 25.0$

| $\frac{u}{s}$      | $\frac{M}{\infty}$ | $\frac{\theta}{s}$ | $\frac{\theta}{w}$ |               |
|--------------------|--------------------|--------------------|--------------------|---------------|
| .82084916+00       | .24999879+02       | .52359876+00       | .61639069+00       |               |
| $\frac{\theta}{s}$ | $\frac{M^*}{1}$    | $\frac{\psi}{1}$   | $\frac{x}{s}$      | $\frac{r}{s}$ |
| .52359876+00       | .16416675+01       | .52359876+00       | .86602539+00       | .50000000+00  |
| .52665306+00       | .16416828+01       | .52056027+00       | .87058479+00       | .50618397+00  |
| .52970736+00       | .16417279+01       | .51755232+00       | .87526131+00       | .51248647+00  |
| .53276166+00       | .16418021+01       | .51457322+00       | .88005938+00       | .51891183+00  |
| .53581595+00       | .16419049+01       | .51162133+00       | .88498377+00       | .52546475+00  |
| .53887025+00       | .16420355+01       | .50869507+00       | .89003957+00       | .53215018+00  |
| .54192455+00       | .16421936+01       | .50579289+00       | .89523210+00       | .53897333+00  |
| .54497885+00       | .16423787+01       | .50291330+00       | .90056714+00       | .54593980+00  |
| .54759682+00       | .16425584+01       | .50046196+00       | .90525798+00       | .55202951+00  |
| .55021479+00       | .16427574+01       | .49802525+00       | .91006202+00       | .55823274+00  |
| .55283276+00       | .16429754+01       | .49560229+00       | .91498355+00       | .56455362+00  |
| .55545073+00       | .16432123+01       | .49319221+00       | .92002692+00       | .57099637+00  |
| .55806870+00       | .16434679+01       | .49079415+00       | .92519699+00       | .57756564+00  |
| .56068667+00       | .16437422+01       | .48840725+00       | .93049882+00       | .58426627+00  |
| .56330464+00       | .16440349+01       | .48603065+00       | .93593773+00       | .59110334+00  |
| .56548628+00       | .16442929+01       | .48405742+00       | .94057899+00       | .59690904+00  |
| .56766792+00       | .16445636+01       | .48209027+00       | .94532286+00       | .60281657+00  |
| .56984957+00       | .16448472+01       | .48012871+00       | .95017292+00       | .60882930+00  |
| .57203121+00       | .16451435+01       | .47817224+00       | .95513300+00       | .61495091+00  |
| .57421285+00       | .16454525+01       | .47622038+00       | .96020724+00       | .62118526+00  |
| .57639449+00       | .16457743+01       | .47427262+00       | .96539987+00       | .62753637+00  |
| .57857613+00       | .16461090+01       | .47232844+00       | .97071534+00       | .63400843+00  |
| .58032145+00       | .16463859+01       | .47077534+00       | .97505939+00       | .63927620+00  |
| .58206676+00       | .16466712+01       | .46922395+00       | .97948770+00       | .64462667+00  |
| .58381207+00       | .16469647+01       | .46767401+00       | .98400284+00       | .65006229+00  |
| .58555739+00       | .16472666+01       | .46612522+00       | .98860773+00       | .65558575+00  |
| .58730270+00       | .16475769+01       | .46457732+00       | .99330524+00       | .66119975+00  |
| .58904801+00       | .16478957+01       | .46303003+00       | .99809849+00       | .66690720+00  |
| .59079333+00       | .16482230+01       | .46148304+00       | .10029906+01       | .67271106+00  |
| .59210231+00       | .16484741+01       | .46003228+00       | .10067268+01       | .67712917+00  |
| .59341130+00       | .16487300+01       | .45916252+00       | .10105219+01       | .68160465+00  |
| .59472028+00       | .16489909+01       | .45800196+00       | .10143776+01       | .68613899+00  |
| .59602927+00       | .16492568+01       | .45684101+00       | .10182956+01       | .69073369+00  |
| .59733825+00       | .16495276+01       | .45567957+00       | .10222775+01       | .69539030+00  |
| .59864704+00       | .16498037+01       | .45451735+00       | .10263244+01       | .70010970+00  |
| .59995574+00       | .16500852+01       | .45335428+00       | .10304385+01       | .70489394+00  |
| .60082820+00       | .16502756+01       | .45257838+00       | .10332196+01       | .70812050+00  |
| .60170066+00       | .16504684+01       | .45180204+00       | .10360321+01       | .71137727+00  |
| .60257313+00       | .16506635+01       | .45102520+00       | .10388765+01       | .71466491+00  |
| .60344559+00       | .16508609+01       | .45024783+00       | .10417537+01       | .71798398+00  |

(Completed)

$$\Theta_s = .52359876 + j0$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $\underline{x}$ | $\underline{r}$ |
|--------------|--------------|--------------|-----------------|-----------------|
| .60431805+00 | .16510606+01 | .44946989+00 | .10446640+01    | .72133493+00    |
| .60519052+00 | .16512627+01 | .44869130+00 | .10476081+01    | .72471845+00    |
| .60606298+00 | .16514671+01 | .44791204+00 | .10505868+01    | .72813514+00    |
| .60649921+00 | .16515703+01 | .44752214+00 | .10520093+01    | .72985008+00    |
| .60693544+00 | .16516740+01 | .44713206+00 | .10536007+01    | .73158561+00    |
| .60737167+00 | .16517783+01 | .44674177+00 | .10551211+01    | .73332370+00    |
| .60780790+00 | .16518833+01 | .44635129+00 | .10566505+01    | .73507050+00    |
| .60824414+00 | .16519888+01 | .44596060+00 | .10581892+01    | .73682611+00    |
| .60868037+00 | .16520950+01 | .44556969+00 | .10597370+01    | .73859050+00    |
| .60911660+00 | .16522018+01 | .44517858+00 | .10612943+01    | .74036390+00    |
| .60955283+00 | .16523092+01 | .44478723+00 | .10628610+01    | .74214634+00    |
| .60998906+00 | .16524172+01 | .44439565+00 | .10644372+01    | .74393789+00    |
| .61042529+00 | .16525258+01 | .44400383+00 | .10660230+01    | .74573860+00    |
| .61086152+00 | .16526351+01 | .44361176+00 | .10676186+01    | .74754865+00    |
| .61129776+00 | .16527450+01 | .44321945+00 | .10692240+01    | .74936810+00    |
| .61173399+00 | .16528556+01 | .44282687+00 | .10708393+01    | .75119703+00    |
| .61217022+00 | .16529667+01 | .44243404+00 | .10724647+01    | .75303550+00    |
| .61260645+00 | .16530785+01 | .44204093+00 | .10741003+01    | .75488371+00    |
| .61304268+00 | .16531910+01 | .44164754+00 | .10757461+01    | .75674167+00    |
| .61347891+00 | .16533041+01 | .44125387+00 | .10774023+01    | .75860954+00    |
| .61391515+00 | .16534178+01 | .44085990+00 | .10790690+01    | .76048739+00    |
| .61435138+00 | .16535322+01 | .44046563+00 | .10807463+01    | .76237530+00    |
| .61478761+00 | .16536473+01 | .44007105+00 | .10824342+01    | .76427339+00    |
| .61522384+00 | .16537630+01 | .43967616+00 | .10841330+01    | .76618180+00    |
| .61566007+00 | .16538793+01 | .43928098+00 | .10858428+01    | .76810057+00    |
| .61609630+00 | .16539964+01 | .43888542+00 | .10875635+01    | .77002985+00    |
| .61653253+00 | .16541142+01 | .43848947+00 | .10892950+01    | .77196978+00    |
| .61696876+00 | .16542326+01 | .43809312+00 | .10910373+01    | .77392039+00    |
| .61740500+00 | .16543516+01 | .43769637+00 | .10927905+01    | .77588169+00    |
| .61784123+00 | .16544712+01 | .43729922+00 | .10945546+01    | .77785369+00    |
| .61827747+00 | .16545914+01 | .43690167+00 | .10963296+01    | .77983639+00    |
| .61871370+00 | .16547122+01 | .43650372+00 | .10981155+01    | .78182979+00    |
| .61915000+00 | .16548336+01 | .43610537+00 | .10999123+01    | .78383389+00    |
| .61958623+00 | .16549556+01 | .43570662+00 | .11017200+01    | .78584869+00    |
| .62002250+00 | .16550782+01 | .43530747+00 | .11035386+01    | .78787419+00    |
| .62045873+00 | .16552014+01 | .43490792+00 | .11053681+01    | .78991039+00    |
| .62089500+00 | .16553252+01 | .43450797+00 | .11072085+01    | .79195729+00    |
| .62133123+00 | .16554496+01 | .43410762+00 | .11090598+01    | .79401489+00    |
| .62176750+00 | .16555746+01 | .43370687+00 | .11109220+01    | .79608319+00    |
| .62220373+00 | .16556992+01 | .43330572+00 | .11127951+01    | .79816219+00    |
| .62264000+00 | .16558244+01 | .43290417+00 | .11146791+01    | .79925189+00    |
| .62307623+00 | .16559502+01 | .43250222+00 | .11165740+01    | .80035229+00    |
| .62351250+00 | .16560766+01 | .43210087+00 | .11184798+01    | .80146339+00    |
| .62394873+00 | .16562036+01 | .43169912+00 | .11203965+01    | .80258509+00    |
| .62438500+00 | .16563312+01 | .43129697+00 | .11223241+01    | .80371739+00    |
| .62482123+00 | .16564594+01 | .43089442+00 | .11242626+01    | .80486029+00    |
| .62525750+00 | .16565882+01 | .43049147+00 | .11262120+01    | .80591379+00    |
| .62569373+00 | .16567170+01 | .43008852+00 | .11281620+01    | .80697729+00    |
| .62613000+00 | .16568468+01 | .42968557+00 | .11301225+01    | .80805079+00    |
| .62656623+00 | .16569776+01 | .42928262+00 | .11320935+01    | .80913429+00    |
| .62700250+00 | .16571094+01 | .42887967+00 | .11340750+01    | .81022779+00    |
| .62743873+00 | .16572422+01 | .42847672+00 | .11360670+01    | .81133129+00    |
| .62787500+00 | .16573760+01 | .42807377+00 | .11380695+01    | .81244479+00    |
| .62831123+00 | .16575108+01 | .42767082+00 | .11400825+01    | .81356829+00    |
| .62874750+00 | .16576466+01 | .42726787+00 | .11421060+01    | .81469179+00    |
| .62918373+00 | .16577834+01 | .42686492+00 | .11441400+01    | .81582529+00    |
| .62962000+00 | .16579212+01 | .42646197+00 | .11461845+01    | .81696879+00    |
| .63005623+00 | .16580600+01 | .42605902+00 | .11482395+01    | .81812229+00    |
| .63049250+00 | .16582008+01 | .42565607+00 | .11503050+01    | .81928579+00    |
| .63092873+00 | .16583426+01 | .42525312+00 | .11523810+01    | .82045929+00    |
| .63136500+00 | .16584854+01 | .42485017+00 | .11544675+01    | .82164279+00    |
| .63180123+00 | .16586292+01 | .42444722+00 | .11565645+01    | .82283629+00    |
| .63223750+00 | .16587740+01 | .42404427+00 | .11586720+01    | .82403979+00    |
| .63267373+00 | .16589198+01 | .42364132+00 | .11607900+01    | .82525329+00    |
| .63311000+00 | .16590666+01 | .42323837+00 | .11629185+01    | .82647679+00    |
| .63354623+00 | .16592144+01 | .42283542+00 | .11650575+01    | .82771029+00    |
| .63398250+00 | .16593632+01 | .42243247+00 | .11672070+01    | .82895379+00    |
| .63441873+00 | .16595130+01 | .42202952+00 | .11693670+01    | .83020729+00    |
| .63485500+00 | .16596638+01 | .42162657+00 | .11715375+01    | .83147079+00    |
| .63529123+00 | .16598156+01 | .42122362+00 | .11737185+01    | .83274429+00    |
| .63572750+00 | .16599684+01 | .42082067+00 | .11759100+01    | .83402779+00    |
| .63616373+00 | .16601232+01 | .42041772+00 | .11781120+01    | .83532129+00    |
| .63660000+00 | .16602790+01 | .42001477+00 | .11803245+01    | .83662479+00    |
| .63703623+00 | .16604358+01 | .41961182+00 | .11825475+01    | .83793829+00    |
| .63747250+00 | .16605936+01 | .41920887+00 | .11847810+01    | .83926179+00    |
| .63790873+00 | .16607524+01 | .41880592+00 | .11870250+01    | .84059529+00    |
| .63834500+00 | .16609122+01 | .41840297+00 | .11892795+01    | .84193879+00    |
| .63878123+00 | .16610730+01 | .41800002+00 | .11915445+01    | .84329229+00    |
| .63921750+00 | .16612348+01 | .41759707+00 | .11938200+01    | .84465579+00    |
| .63965373+00 | .16613976+01 | .41719412+00 | .11961060+01    | .84602929+00    |
| .64009000+00 | .16615614+01 | .41679117+00 | .11984025+01    | .84741279+00    |
| .64052623+00 | .16617262+01 | .41638822+00 | .12007095+01    | .84880629+00    |
| .64096250+00 | .16618920+01 | .41598527+00 | .12030270+01    | .85020979+00    |
| .64139873+00 | .16620588+01 | .41558232+00 | .12053550+01    | .85162329+00    |
| .64183500+00 | .16622266+01 | .41517937+00 | .12076935+01    | .85304679+00    |
| .64227123+00 | .16623954+01 | .41477642+00 | .12100425+01    | .85448029+00    |
| .64270750+00 | .16625662+01 | .41437347+00 | .12124020+01    | .85592379+00    |
| .64314373+00 | .16627380+01 | .41397052+00 | .12147720+01    | .85737729+00    |
| .64358000+00 | .16629108+01 | .41356757+00 | .12171525+01    | .85884079+00    |
| .64401623+00 | .16630846+01 | .41316462+00 | .12195435+01    | .86031429+00    |
| .64445250+00 | .16632594+01 | .41276167+00 | .12219450+01    | .86179779+00    |
| .64488873+00 | .16634352+01 | .41235872+00 | .12243570+01    | .86329129+00    |
| .64532500+00 | .16636120+01 | .41195577+00 | .12267795+01    | .86479479+00    |
| .64576123+00 | .16637898+01 | .41155282+00 | .12292125+01    | .86630829+00    |
| .64619750+00 | .16639686+01 | .41114987+00 | .12316560+01    | .86783179+00    |
| .64663373+00 | .16641484+01 | .41074692+00 | .12341100+01    | .86936529+00    |
| .64707000+00 | .16643292+01 | .41034397+00 | .12365745+01    | .87090879+00    |
| .64750623+00 | .16645110+01 | .40994102+00 | .12390495+01    | .87246229+00    |
| .64794250+00 | .16646938+01 | .40953807+00 | .12415350+01    | .87402579+00    |
| .64837873+00 | .16648776+01 | .40913512+00 | .12440310+01    | .87559929+00    |
| .64881500+00 | .16650624+01 | .40873217+00 | .12465375+01    | .87718279+00    |
| .64925123+00 | .16652482+01 | .40832922+00 | .12490545+01    | .87877629+00    |
| .64968750+00 | .16654350+01 | .40792627+00 | .12515820+01    | .88037979+00    |
| .65012373+00 | .16656228+01 | .40752332+00 | .12541200+01    | .88199329+00    |
| .65056000+00 | .16658116+01 | .40712037+00 | .12566685+01    | .88361679+00    |
| .65099623+00 | .16660014+01 | .40671742+00 | .12592275+01    | .88525029+00    |
| .65143250+00 | .16661922+01 | .40631447+00 | .12617970+01    | .88689379+00    |
| .65186873+00 | .16663840+01 | .40591152+00 | .12643770+01    | .88854729+00    |
| .65230500+00 | .16665768+01 | .40550857+00 | .12669675+01    | .89021079+00    |
| .65274123+00 | .16667706+01 | .40510562+00 | .12695685+01    | .89188429+00    |
| .65317750+00 | .16669654+01 | .40470267+00 | .12721800+01    | .89356779+00    |
| .65361373+00 | .16671612+01 | .40429972+00 | .12748020+01    | .89526129+00    |
| .65405000+00 | .16673580+01 | .40389677+00 | .12774345+01    | .89696479+00    |
| .65448623+00 | .16675558+01 | .40349382+00 | .12800775+01    | .89867829+00    |
| .65492250+00 | .16677546+01 | .40309087+00 | .12827310+01    | .89939179+00    |
| .65535873+00 | .16679544+01 | .40268792+00 | .12853950+01    | .90011529+00    |
| .65579500+00 | .16681552+01 | .40228497+00 | .12880695+01    | .90084879+00    |
| .65623123+00 | .16683570+01 | .40188202+00 | .12907545+01    | .90159229+00    |
| .65666750+00 | .16685608+01 | .40147907+00 | .12934500+01    | .90234579+00    |
| .65710373+00 | .16687656+01 | .40107612+00 | .12961560+01    | .90310929+00    |
| .65754000+00 | .16689714+01 | .40067317+00 | .12988725+01    | .90388279+00    |
| .65797623+00 | .16691782+01 | .40027022+00 | .13016000+01    | .90465629+00    |
| .65841250+00 | .16693860+01 | .39986727+00 | .13043385+01    | .90543979+00    |
| .65884873+00 | .16695948+01 | .39946432+00 | .13070875+01    | .90623329+00    |
| .65928500+00 | .16698046+01 | .39906137+00 | .13098470+01    | .90703679+00    |
| .65972123+00 | .16700154+01 | .39865842+00 | .13126170+01    | .90784029+00    |
| .66015750+00 | .16702272+01 | .39825547+00 | .13153975+01    | .90865379+00    |
| .66059373+00 | .16704400+01 | .39785252+00 | .13181885+01    | .90947729+00    |
| .66103000+00 | .16706538+01 | .39744957+00 | .13209900+01    | .91031079+00    |
| .66146623+00 | .16708686+01 | .39704662+00 | .13238020+01    | .91115429+00    |
| .66190250+00 | .16710844+01 | .39664367+00 | .13266245+01    | .91200779+00    |
| .66233873+00 | .16713012+01 | .39624072+00 | .13294575+01    | .91287129+00    |
| .66277500+00 | .16715190+01 | .39583777+00 | .13323010+01    | .91374479+00    |
| .66321123+00 | .16717378+01 | .39543482+00 | .13351550+01    | .91462829+00    |
| .66364750+00 | .16719576+01 | .39503187+00 | .13380195+01    | .91552179+00    |
| .66408373+00 | .16721784+01 | .39462892+00 | .13408945+01    | .91642529+00    |
| .66452000+00 | .16723992+01 | .39422597+00 | .13437800+01    | .91733879+00    |
| .66495623+00 | .16726210+01 | .39382302+00 | .13466760+01    | .91826229+00    |
| .66539250+00 | .16728438+01 | .39342007+00 | .13495825+01    | .91919579+00    |
| .66582873+00 | .16730676+01 | .39301712+00 | .13524995+01    | .92013929+00    |
| .66626500+00 | .16732924+01 | .39261417+00 | .13554270+01    | .92109279+00    |
| .66670123+00 | .16735182+01 | .39221122+00 | .13583650+01    | .92205629+00    |
| .66713750+00 | .16737450+01 | .39180827+00 | .13613135+01    | .92302979+00    |
| .66757373+00 | .16739728+01 | .39140532+00 | .13642725+01    | .92401329+00    |
| .66801000+00 | .16742016+01 | .39100237+00 | .13672420+01    | .92500679+00    |
| .66844623+00 | .16744314+01 | .39059942+00 | .13702220+01    | .92601029+00    |
| .66888250+00 | .16746622+01 | .39019647+00 | .13732          |                 |

$$.49155393 + 01 = \Delta S/R$$

$$.28245050 + 03 = P_s/P_{\infty}$$

$$.41361259 + g1 = \rho_s / \rho_m$$

•68288662+02 = T./T.



227 TABLE 229. CONICAL FLOWFIELD  $\theta_s = 30.0 \text{ DEG}$ ;  $M_\infty = 27.5$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .82131663+00 | .27500001+02 | .52359876+00 | .61609919+00 |              |
| $e$          | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .52359876+00 | .16426024+01 | .52359876+00 | .86602539+00 | .50000000+00 |
| .52665306+00 | .16426177+01 | .52056027+00 | .87059762+00 | .50619143+00 |
| .52970736+00 | .16426628+01 | .51755232+00 | .87528743+00 | .51250176+00 |
| .53276166+00 | .16427371+01 | .51457321+00 | .88009940+00 | .51893543+00 |
| .53581595+00 | .16428400+01 | .51162129+00 | .88503828+00 | .52549711+00 |
| .53887025+00 | .16429708+01 | .50869497+00 | .89010911+00 | .53219176+00 |
| .54192455+00 | .16431290+01 | .50579271+00 | .89531735+00 | .53902466+00 |
| .54497885+00 | .16433141+01 | .50291304+00 | .90066878+00 | .54600141+00 |
| .54759682+00 | .16434940+01 | .50046159+00 | .90537423+00 | .55210041+00 |
| .55021479+00 | .16436931+01 | .49802475+00 | .91019337+00 | .55831331+00 |
| .55283276+00 | .16439113+01 | .49560163+00 | .91513056+00 | .56464432+00 |
| .55545073+00 | .16441483+01 | .49319136+00 | .92019030+00 | .57109777+00 |
| .55806870+00 | .16444041+01 | .49079307+00 | .92537743+00 | .57767829+00 |
| .56068667+00 | .16446786+01 | .48840591+00 | .93069698+00 | .58439069+00 |
| .56330464+00 | .16449715+01 | .48602901+00 | .93615435+00 | .59124015+00 |
| .56548628+00 | .16452297+01 | .48405550+00 | .94081155+00 | .59705663+00 |
| .56766792+00 | .16455007+01 | .48208804+00 | .94557188+00 | .60297536+00 |
| .56984957+00 | .16457844+01 | .48012614+00 | .95043911+00 | .60899986+00 |
| .57203121+00 | .16460809+01 | .47816929+00 | .95541697+00 | .61513374+00 |
| .57421285+00 | .16463902+01 | .47621701+00 | .96050961+00 | .62138087+00 |
| .57639449+00 | .16467123+01 | .47426879+00 | .96572135+00 | .62774535+00 |
| .57857613+00 | .16470473+01 | .47232412+00 | .97105664+00 | .63423134+00 |
| .58032145+00 | .16473245+01 | .47077059+00 | .97541708+00 | .63951071+00 |
| .58206676+00 | .16476100+01 | .46921875+00 | .97986232+00 | .64487322+00 |
| .58381207+00 | .16479038+01 | .46766830+00 | .98439497+00 | .65032133+00 |
| .58555739+00 | .16482060+01 | .46611899+00 | .98901793+00 | .65585776+00 |
| .58730270+00 | .16485166+01 | .46457054+00 | .99373411+00 | .66148522+00 |
| .58904801+00 | .16488357+01 | .46302265+00 | .99854667+00 | .66720667+00 |
| .59079333+00 | .16491633+01 | .46147504+00 | .10034588+01 | .67302503+00 |
| .59210231+00 | .16494147+01 | .46003143+00 | .10072103+01 | .67745443+00 |
| .59341130+00 | .16496709+01 | .45915350+00 | .10110213+01 | .68194155+00 |
| .59472028+00 | .16499321+01 | .45799240+00 | .10148934+01 | .68648785+00 |
| .59602927+00 | .16501982+01 | .45683089+00 | .10188281+01 | .69109488+00 |
| .59733825+00 | .16504693+01 | .45566885+00 | .10228271+01 | .69576416+00 |
| .59864704+00 | .16507459+01 | .45450601+00 | .10268917+01 | .70049669+00 |
| .59995574+00 | .16510276+01 | .45334229+00 | .10310239+01 | .70529443+00 |
| .60082820+00 | .16512183+01 | .45256595+00 | .10338174+01 | .70853021+00 |
| .60170066+00 | .16514113+01 | .45178915+00 | .10366425+01 | .71179643+00 |
| .60257313+00 | .16516066+01 | .45101184+00 | .10394998+01 | .71509366+00 |
| .60344559+00 | .16518043+01 | .45023398+00 | .10423900+01 | .71842254+00 |

TABLE 229. (Concluded)

$$M_{\infty} = .27500001+02$$

$$\Theta_s = .52359876+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .60431805+00 | .16520042+01 | .44945554+00 | .10453136+01 | .72178353+00 |
| .60519052+00 | .16522066+01 | .44867644+00 | .10482714+01 | .72517731+00 |
| .60606298+00 | .16524113+01 | .44789666+00 | .10512640+01 | .72860447+00 |
| .60649921+00 | .16525146+01 | .44750649+00 | .10527735+01 | .73033075+00 |
| .60693544+00 | .16526185+01 | .44711612+00 | .10542920+01 | .73206563+00 |
| .60737167+00 | .16527229+01 | .44672557+00 | .10558196+01 | .73380920+00 |
| .60780790+00 | .16528281+01 | .44633481+00 | .10573563+01 | .73556149+00 |
| .60824414+00 | .16529337+01 | .44594383+00 | .10589023+01 | .73732267+00 |
| .60868037+00 | .16530401+01 | .44555264+00 | .10604576+01 | .73909270+00 |
| .60911660+00 | .16531470+01 | .44516123+00 | .10620223+01 | .74087178+00 |
| .60955283+00 | .16532545+01 | .44476958+00 | .10635965+01 | .74265993+00 |
| .60998906+00 | .16533627+01 | .44437771+00 | .10651804+01 | .74445730+00 |
| .61042529+00 | .16534715+01 | .44398558+00 | .10667739+01 | .74626391+00 |
| .61086152+00 | .16535809+01 | .44359320+00 | .10683773+01 | .74807990+00 |
| .61129776+00 | .16536910+01 | .44320058+00 | .10699906+01 | .74990538+00 |
| .61173399+00 | .16538017+01 | .44280769+00 | .10716139+01 | .75174040+00 |
| .61217022+00 | .16539131+01 | .44241454+00 | .10732474+01 | .75358505+00 |
| .61260645+00 | .16540250+01 | .44202109+00 | .10748911+01 | .75543948+00 |
| .61304268+00 | .16541376+01 | .44162738+00 | .10765451+01 | .75730371+00 |
| .61347891+00 | .16542509+01 | .44123337+00 | .10782096+01 | .75917797+00 |
| .61391515+00 | .16543648+01 | .44083905+00 | .10798847+01 | .76106224+00 |
| .61435138+00 | .16544794+01 | .44044444+00 | .10815704+01 | .76295666+00 |
| .61478761+00 | .16545947+01 | .44004952+00 | .10832670+01 | .76486135+00 |
| .61522384+00 | .16547105+01 | .43965429+00 | .10849745+01 | .76677645+00 |
| .61566007+00 | .16548271+01 | .43925871+00 | .10866930+01 | .76870202+00 |
| .61609630+00 | .16549443+01 | .43886279+00 | .10884227+01 | .77063814+00 |
| .61609919+00 | .16549451+01 | .43886016+00 | .10884341+01 | .77065100+00 |

$$.51943572+01 = \Delta S/R$$

$$.34147787+03 = P_s/P_{\infty}$$

$$.41457948+01 = \rho_s/\rho_{\infty}$$

$$.82367288+02 = T_s/T_{\infty}$$



TABLE 230. CONICAL FLOWFIELD  $\theta_s = 30.0$  DEG;  $M_\infty = 30.0$

| $u_s$        | $M_\infty$   | $\theta_s$   | $\theta_w$   |              |
|--------------|--------------|--------------|--------------|--------------|
| .82167269+00 | .30000036+02 | .52359876+00 | .61587735+00 |              |
| $\theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
| .52359876+00 | .16433145+01 | .52359876+00 | .86602539+00 | .50000000+00 |
| .52665306+00 | .16433298+01 | .52056027+00 | .87060744+00 | .50619715+00 |
| .52970736+00 | .16433749+01 | .51755232+00 | .87530746+00 | .51251349+00 |
| .53276166+00 | .16434493+01 | .51457319+00 | .88012997+00 | .51895346+00 |
| .53581595+00 | .16435522+01 | .51162124+00 | .88507984+00 | .52552179+00 |
| .53887025+00 | .16436830+01 | .50869489+00 | .89016216+00 | .53222348+00 |
| .54192455+00 | .16438413+01 | .50579259+00 | .89538237+00 | .53906380+00 |
| .54497885+00 | .16440265+01 | .50291283+00 | .90074624+00 | .54604837+00 |
| .54759682+00 | .16442064+01 | .50046130+00 | .90546285+00 | .55215444+00 |
| .55021479+00 | .16444056+01 | .49802437+00 | .91029359+00 | .55837478+00 |
| .55283276+00 | .16446239+01 | .49560113+00 | .91524282+00 | .56471359+00 |
| .55545073+00 | .16448611+01 | .49319071+00 | .92031503+00 | .57117518+00 |
| .55806870+00 | .16451170+01 | .49079255+00 | .92551515+00 | .57776426+00 |
| .56068667+00 | .16453916+01 | .48840489+00 | .93084821+00 | .58448565+00 |
| .56330464+00 | .16456847+01 | .48602777+00 | .93631966+00 | .59134455+00 |
| .56592261+00 | .16459430+01 | .48405404+00 | .94098903+00 | .59716926+00 |
| .56766792+00 | .16462141+01 | .48208634+00 | .94576203+00 | .60309662+00 |
| .56984957+00 | .16464981+01 | .48012417+00 | .95064227+00 | .60913005+00 |
| .57203121+00 | .16467948+01 | .47816703+00 | .95563071+00 | .61527329+00 |
| .57421285+00 | .16471042+01 | .47621443+00 | .96074042+00 | .62153019+00 |
| .57639449+00 | .16474265+01 | .47426586+00 | .96596675+00 | .62790486+00 |
| .57857613+00 | .16477617+01 | .47232081+00 | .97131728+00 | .63440157+00 |
| .58075777+00 | .16481091+01 | .47037695+00 | .97669034+00 | .63968987+00 |
| .58293941+00 | .16483248+01 | .46921475+00 | .98014855+00 | .64506159+00 |
| .58512105+00 | .16486188+01 | .46766394+00 | .98469459+00 | .65051927+00 |
| .58730269+00 | .16489212+01 | .46611423+00 | .98933139+00 | .65606563+00 |
| .58948433+00 | .16492320+01 | .46456534+00 | .99406188+00 | .66170341+00 |
| .59166597+00 | .16495514+01 | .46301700+00 | .99888925+00 | .66743557+00 |
| .59384761+00 | .16498793+01 | .46146891+00 | .10038167+01 | .67326508+00 |
| .59602925+00 | .16501309+01 | .46003078+00 | .10075800+01 | .67770309+00 |
| .59821089+00 | .16503873+01 | .45914659+00 | .10114031+01 | .68219907+00 |
| .60039253+00 | .16506487+01 | .45798507+00 | .10152876+01 | .68675452+00 |
| .60257417+00 | .16509151+01 | .45682313+00 | .10192351+01 | .69137096+00 |
| .60475581+00 | .16511864+01 | .45566064+00 | .10232473+01 | .69604998+00 |
| .60693745+00 | .16514633+01 | .45449726+00 | .10273251+01 | .70079216+00 |
| .60911909+00 | .16517454+01 | .45333304+00 | .10314711+01 | .70560020+00 |
| .61130073+00 | .16519362+01 | .45255636+00 | .10342741+01 | .70884302+00 |
| .61348237+00 | .16521294+01 | .45177921+00 | .10371088+01 | .71211647+00 |
| .61566401+00 | .16523249+01 | .45100153+00 | .10399760+01 | .71542110+00 |
| .61784565+00 | .16525227+01 | .45022330+00 | .10428762+01 | .71875747+00 |

TABLE 230. (Concluded)

$$M_{\infty} = .30000036+02$$

$$\Theta_s = .52359876+00$$

| $\Theta$     | $M_1^*$      | $\psi_1$     | $x$          | $r$          |
|--------------|--------------|--------------|--------------|--------------|
| .60431796+00 | .16527229+01 | .44944448+00 | .10458100+01 | .72212613+00 |
| .60519042+00 | .16529255+01 | .44866499+00 | .10487783+01 | .72552779+00 |
| .60606288+00 | .16531305+01 | .44788481+00 | .10517815+01 | .72896297+00 |
| .60649911+00 | .16532338+01 | .44749443+00 | .10532964+01 | .73069333+00 |
| .60693534+00 | .16533378+01 | .44710386+00 | .10548204+01 | .73243234+00 |
| .60737158+00 | .16534424+01 | .44671309+00 | .10563534+01 | .73418003+00 |
| .60780781+00 | .16535476+01 | .44632211+00 | .10578957+01 | .73593658+00 |
| .60824404+00 | .16536534+01 | .44593092+00 | .10594473+01 | .73770194+00 |
| .60868027+00 | .16537598+01 | .44553950+00 | .10610082+01 | .73947632+00 |
| .60911650+00 | .16538669+01 | .44514786+00 | .10625786+01 | .74125972+00 |
| .60955273+00 | .16539745+01 | .44475599+00 | .10641587+01 | .74305232+00 |
| .60998897+00 | .16540828+01 | .44436388+00 | .10657483+01 | .74485411+00 |
| .61042520+00 | .16541918+01 | .44397152+00 | .10673478+01 | .74666522+00 |
| .61086143+00 | .16543013+01 | .44357891+00 | .10689571+01 | .74848572+00 |
| .61129766+00 | .16544115+01 | .44318604+00 | .10705764+01 | .75031581+00 |
| .61173389+00 | .16545223+01 | .44279291+00 | .10722059+01 | .75215548+00 |
| .61217012+00 | .16546338+01 | .44239949+00 | .10738455+01 | .75400489+00 |
| .61260635+00 | .16547459+01 | .44200581+00 | .10754954+01 | .75586407+00 |
| .61304259+00 | .16548587+01 | .44161183+00 | .10771558+01 | .75773314+00 |
| .61347882+00 | .16549721+01 | .44121756+00 | .10788267+01 | .75961229+00 |
| .61391505+00 | .16550861+01 | .44082299+00 | .10805081+01 | .76150148+00 |
| .61435128+00 | .16552008+01 | .44042812+00 | .10822004+01 | .76340094+00 |
| .61478751+00 | .16553162+01 | .44003293+00 | .10839035+01 | .76531067+00 |
| .61522374+00 | .16554322+01 | .43963741+00 | .10856177+01 | .76723086+00 |
| .61565997+00 | .16555489+01 | .43924155+00 | .10873429+01 | .76916160+00 |
| .61587735+00 | .16556673+01 | .43904418+00 | .10882068+01 | .77012765+00 |

$$.54499542+01 = \Delta S/R$$

$$.40612439+03 = P_s/P_{\infty}$$

$$.41531894+01 = \rho_s/\rho_{\infty}$$

$$.97786148+02 = T_s/T_{\infty}$$

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